

• The public interest would best be served by approving the merger.

\* \* \* \* \*

8. Section III.B.1 of Chapter 3 of appendix B to part 701 is amended by removing the last sentence of that section.

9. The glossary to appendix B to part 701 is amended by adding a definition of “in danger of insolvency” to be added in alphabetical order to read as follows:

\* \* \* \* \*

*In danger of insolvency*—In making the determination that a particular credit union is in danger of insolvency, NCUA will establish that the credit union falls into one or more of the following categories:

1. The credit union’s net worth is declining at a rate that will render it insolvent within 24 months. In projecting future net worth, NCUA may rely on data in addition to Call Report data. The trend must be supported by at least 12 months of historic data.

2. The credit union’s net worth is declining at a rate that will take it under two percent (2%) net worth within 12 months. In projecting future net worth, NCUA may rely on data in addition to Call Report data. The trend must be supported by at least 12 months of historic data.

3. The credit union’s net worth, as self-reported on its Call Report, is significantly undercapitalized, and NCUA determines that there is no reasonable prospect of the credit union becoming adequately capitalized in the succeeding 36 months. In making its determination on the prospect of achieving adequate capitalization, NCUA will assume that, if adverse economic conditions are affecting the value of the credit union’s assets and liabilities, including property values and loan delinquencies related to unemployment, these adverse conditions will not further deteriorate.

\* \* \* \* \*

[FR Doc. E9–30557 Filed 12–28–09; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Parts 21 and 29

[Docket No. SW014; Notice No. 29–014–SC]

#### Special Conditions: Erickson Air-Crane Incorporated S–64E and S–64F Rotorcraft

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed special conditions.

**SUMMARY:** This action proposes special conditions for the Erickson Air-Crane Incorporated (Erickson Air-Crane) S–64E and S–64F rotorcraft. These rotorcraft have novel or unusual design feature(s) associated with being

transport category rotorcraft designed only for use in heavy external-load operations. At the time of original type certification, a special condition was issued for each model helicopter because the applicable airworthiness regulations did not contain adequate or appropriate safety standards for turbine-engine rotorcraft or for rotorcraft with a maximum gross weight over 20,000 pounds that were designed solely to perform external-load operations. At the request of Erickson Air-Crane, the current type certificate (TC) holder for these helicopter models, we propose the following to resolve reported difficulty in applying the existing special conditions and to eliminate any confusion that has occurred in Erickson’s dealings with a foreign authority. Specifically, we are proposing to consolidate the separate special conditions for each model helicopter into one special condition to clarify and more specifically reference certain special condition requirements to the regulatory requirements, to add an inadvertently omitted fire protection requirement, to recognize that occupants may be permitted in the two observer seats and the rear-facing operator seat during other than external-load operations, and to clarify the requirements relating to operations within 5 minutes of a suitable landing area.

The requirements in this special condition continue to contain safety standards the Administrator considers necessary to establish a level of safety equivalent to that established by the airworthiness standards existing at the time of certification.

**DATES:** We must receive your comments by February 12, 2010.

**ADDRESSES:** You must mail two copies of your comments to: Federal Aviation Administration (FAA), Rotorcraft Standards Staff, Attention: Docket No. SW014 (ASW–111), Fort Worth, Texas 76193–0110. You may deliver two copies to the Rotorcraft Standards Staff (ASW–111) at 2601 Meacham Blvd., Fort Worth, Texas 76137. You must mark your comments: Docket No. SW014. You can inspect comments in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m. The docket is maintained in the Rotorcraft Directorate at 2601 Meacham Blvd., Fort Worth, Texas.

**FOR FURTHER INFORMATION CONTACT:**

Stephen Barbini, FAA, Rotorcraft Directorate, Rotorcraft Standards Staff (ASW–111), Fort Worth, Texas 76193–0110, telephone (817) 222–5196, facsimile (817) 222–5961.

**SUPPLEMENTARY INFORMATION:**

### Comments Invited

We invite interested persons to take part in this rulemaking by sending written comments, data, or views on the changes made by this special condition, which are detailed in the Discussion section of this preamble. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel on these special conditions. You can inspect the docket before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this preamble between 7:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions based on the comments we receive.

If you want us to acknowledge receipt of your comments on this proposal, include with your comments a pre-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it back to you.

### Background

On November 27, 1967, Sikorsky Aircraft Corporation (Sikorsky) filed an application for type certification for its Model S–64E helicopter. This rotorcraft is the civil version of the United States Army Model CH–54A flying crane. The S–64E has a maximum weight of approximately 30,000 pounds when flying only with internal fuel loadings and personnel, and without external loads. It has a maximum weight of 42,000 pounds, of which a maximum of 20,000 pounds may be external loads. Type certificate H6EA was issued on August 21, 1969, which included special condition No. 29–6–EA–2. This special condition includes conditions for type certification for carrying Class B external loads.

On April 2, 1969, Sikorsky filed for an amendment to its type certificate to add the Model S–64F. This aircraft is the civil version of the United States Army Model CH–54B flying crane. The S–64F has a maximum weight of approximately 30,000 pounds when flying only with internal fuel loadings

and personnel, and without external loads. It has a maximum weight of 47,000 pounds, of which a maximum of 25,000 pounds may be external loads. Type certificate H6EA was amended on November 25, 1970, to add the F model, including special condition No. 29-16-EA-5 and Amendment No. 1 to that special condition. This Model S-64F special condition includes requirements for type certification for carrying Class A and B external loads.

The 14 CFR part 29 regulations applicable at the time of certification required the Models S-64E and S-64F to comply with Category A regulations. However, strict adherence to those regulations was deemed inappropriate for these model aircraft and their intended operations. The special conditions created for the Model S-64E and Model S-64F combined the appropriate standards from both Category A and B, plus added safety and other requirements necessary to establish compliance with the airworthiness requirements of Subpart D of 14 CFR part 133 for Class A and B rotorcraft load combinations. Additionally, the special conditions allowed operations under 14 CFR part 91. The combination of regulations and special conditions ensured a level of safety equivalent to 14 CFR part 29 requirements at the time of certification.

Both aircraft were specifically type certificated as "industrial flying cranes," which are used only to carry cargo and all cargo is carried as an external load. The cockpit contains only five seats, allowing for two pilots, an aft-facing hoist operator and two observers. The rotorcraft does not have a passenger compartment and is not designed to transport passengers. 14 CFR part 91 operations are allowed. The aircraft are powered by two Pratt and Whitney turbo shaft engines (Series JFTD12A); the S-64E uses the model 4A which generates 4,500 horsepower and the S-64F uses the model 5A which generates 4,800 horsepower. The engines drive a six-blade single main rotor approximately 72 feet in diameter and a four-blade tail rotor approximately 16 feet in diameter.

Since the time of original certification, 14 CFR part 29 has been modified to recognize that most transport category rotorcraft are being used in utility work, rather than in air carrier operations. The regulatory changes now enable a rotorcraft of more than 20,000 pounds and nine or less passenger seats to be certificated as Category B provided certain Category A subparts are met.

Since the S-64's certification, the regulations have been amended to better

accommodate rotorcraft designed to operate under the external load provisions of 14 CFR part 133. However, no transport category rotorcraft (over 20,000 pounds) has been designed with the unique and novel features of the "skycrane." In 1992, the type certificate for the Model S-64E and Model S-64F was transferred from Sikorsky to Erickson Air-Crane Incorporated. In 2004, the Model S-64F received a type certificate from the European Aviation Safety Agency (EASA). In 2005, the Model S-64E was certificated to carry Class A external loads under 14 CFR part 133.

#### Type Certification Basis

The original type certification basis is as follows:

For the *Model S-64E*: 14 CFR part 29, 1 February 1965, including Amendments 29-1 and 29-2 except 14 CFR § 29.855(d), and Special Condition No. 29-6-EA-2. For the *Model S-64F*: 14 CFR part 29, dated 1 February 1965 including Amendments 29-1 and 29-2 except 14 CFR § 29.855(d), and Special Condition No. 29-16-EA-5 including Amendment No. 1.

We have found that the applicable airworthiness regulations for 14 CFR part 29 do not contain adequate or appropriate safety standards for the Erickson S-64E and S-64F rotorcraft because of novel or unusual design features. Therefore, special conditions were prescribed under the provisions of § 21.16. Special conditions, as appropriate, are defined in § 11.19 and issued per § 11.38, and become part of the type certification basis under § 21.17(a)(2).

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, the special conditions would also apply to the other model per § 21.101(a)(1).

#### Novel or Unusual Design Features

The Erickson Air-Crane S-64 rotorcraft incorporates the following novel or unusual design features:

The aircraft was designed specifically as an industrial flying crane—

(a) With an airframe—

(1) Designed solely for external load capabilities with no passenger cabin and accommodations in the cockpit only for—

(i) One pilot,

(ii) One copilot,  
(iii) One aft-stick operator, and  
(iv) Two observers.

(2) Designed with two small baggage compartments in the nose.

(3) Designed with multiple "hard points" each with load ratings specifically for the carriage of external loads.

(b) With a rear-facing aft-stick operator seat, which allows for—

(1) precision placement of external loads, and

(2) limited flight operations capabilities.

(c) With neither engine equipped with a cowl.

(d) That weighs over 20,000 pounds, but is designed solely to carry cargo in external load operations.

#### Discussion

The type certification basis for the Model S-64E helicopter contained Special Condition No. 29-6-EA-2, dated January 13, 1969. The type certification basis for the model S-64F helicopter contained Special Condition No. 29-16-EA-5, issued December 3, 1969 and Amendment 1 to that Special Condition issued November 13, 1970. The special condition for the model S-64E included requirements for type certification without external loads (including flight conditions, propulsion conditions, systems condition, and operating limitations conditions) and requirements for type certification with external loads (including general conditions, flight conditions, propulsion conditions, systems condition, and operating conditions). The special condition including Amendment 1 for the model S-64F included essentially the same requirements as those for the model S-64E, but included additional requirements for Class A load combinations.

We have reviewed Special Conditions No. 29-6-EA-2 and No. 29-16-EA-5, including Amendment No. 1. We have determined that the original special conditions applied to the model S-64 ensure a level of safety equivalent to 14 CFR part 29 requirements at the time of certification for both the E and F model rotorcraft.

At the request of Erickson Air Crane, we propose to:

(a) Consolidate the special conditions for both model helicopters into one document.

(b) Indicate whether a special condition requirement is "in lieu of" or "in addition to" a standard certification requirement and make specific reference to the certification requirement. The original Special Conditions did not delineate the novel or unusual design

features of the Air-Crane, which resulted in an unclear application of the “in addition to” and “in lieu of” requirements as they pertained to the rules existing at the time of certification.

(c) Reference 14 CFR part 133 instead of the various rotorcraft load combination classes for the special condition requirements concerning placards.

(d) Modify the occupancy special condition to allow non-crewmembers who are not providing compensation to the operator, to be transported, as otherwise permitted by the regulations. Operations are currently limited to occupants that are flight crewmembers, flight crewmember trainees, or other persons performing essential functions connected with external load operations or necessary for an activity directly associated with external load operations.

(e) Remove the special condition operating limitation that required the helicopters be operated so that a suitable landing area could be reached in no more than 5 minutes, and now requiring that only when flying over a congested area must the helicopter be operated so that a suitable landing area can be reached in no more than 5 minutes.

(f) Add a requirement to comply with § 29.855(d), at Amendment level 29–3, effective February 25, 1968, which was excluded from the original special condition as indicated on the type certificate data sheet, requiring the baggage compartment in the airframe nose be sealed to contain cargo or baggage compartment fires.

Neither consolidating the requirements, specifying the “in lieu of” or “in addition to” references, nor referencing 14 CFR part 133 are intended to make any substantive changes from the requirements contained in Special Condition No. 29–6–EA–2 nor Special Condition 29–16–EA–5, as amended. However, one change that has been proposed is to the “occupant” standard.

The original special conditions only permitted flight crewmembers, flight crewmember trainees, or persons performing an essential or necessary function in connection with the external load operation to be carried on board the helicopter. This occupancy standard was taken directly from 14 CFR § 133.35, dealing with the carriage of persons during rotorcraft external-load operations. At the time of original certification, there was no intent to allow the carriage of persons other than crewmember trainees and those required in connection with the external-load operation. Flights

conducted under 14 CFR part 91 regulations were only expected to occur when the helicopter was being re-positioned with two pilot-crewmembers. In addition, limitations were placed on the S–64E and S–64F helicopter designs because they were not the typical transport category helicopter because they did not meet all appropriate 14 CFR part 29 transport category helicopter requirements. In particular, the designs do not include a power-plant fire extinguishing system and the related cowlings that assist in engine fire suppression.

Since original certification, operators have stated that they would like the option to use the additional three seats, which includes the one rear-facing seat occupied by a crewmember during external-load operations, to carry support crews between operational bases and the worksites. The intended effect of removing the essential crewmember and crewmember trainee limitation recognizes that these model helicopters are not operated exclusively under 14 CFR part 133. Under this proposal, we recognize that the two observer seats and the rear-facing aft-stick operator’s seat *may* be occupied by persons other than persons performing an essential or necessary function in connection with the external load operation during 14 CFR part 91 operations. The intent of this provision is to allow the two observer seats and the rear-facing operator’s seat, when the rear-facing aft-stick operator’s controls are disengaged and the collective guard is installed to prevent unintentional movement, to be occupied during other than external-load operations. As described in the FAA-approved flight manual, the aft-stick operator’s controls are only to be engaged when a qualified crewmember is at the main and aft-stick operator’s controls.

From an engine-fire safety standpoint, single-engine helicopters certificated to Category B requirements of 14 CFR part 29 are permitted to carry up to nine passengers. However, if an engine fails due to a fire, although the fire may be extinguished, the helicopter will still be forced to execute an auto-rotation. Depending on where the helicopter is operating, a safe autorotative landing may not be possible. In addition, helicopters certificated to 14 CFR part 27 requirements are not required to have a power-plant fire protection system, but are certificated to carry up to nine passengers. If a twin-engine model S–64E or S–64F helicopter has an engine failure due to an engine fire, these helicopters can still fly on a single engine and the certification standards require that they must be safely

controlled so that the essential structure, controls, and parts can perform their essential functions for at least five minutes in order to reach a possible suitable landing area.

Although we propose to remove the “occupant” limitation, when conducting other than external-load operations, which most commonly we anticipate may be 14 CFR part 91 operations, operators would still be required to comply with the other FAA operating requirements applicable to their particular operation.<sup>1</sup>

Another current special condition operating limitation requires that the helicopters be operated at an altitude and over routes, which provide suitable landing areas that can be reached in no more than 5 minutes. We are proposing to qualify this limitation and only require this limitation when the helicopters are operated over a congested area. The 5-minute portion of the limitation complements the fire protection requirements in § 29.861, which for Category B rotorcraft requires that certain structure, controls, and other essential parts be able to perform their essential functions for at least 5 minutes under foreseeable powerplant fire conditions. Relaxing the limitation by allowing flights over other than congested areas that may not be within the 5-minute distance still exceeds the safety standard in the current § 133.33(d) provision, which allows the holder of a Rotorcraft External-Load Operator Certificate to conduct

<sup>1</sup> Some operational regulations that may apply during 14 CFR part 91 operations include, 14 CFR 61.113(a) which, with some exceptions, prohibits a private pilot from acting as pilot in command of an aircraft carrying passengers for compensation or hire, and from acting as pilot-in-command for compensation or hire. An exception to 14 CFR 61.113(a), 14 CFR 61.113(b) allows a private pilot to act as pilot in command of an aircraft for compensation or hire in connection with any business or employment if the flight is only incidental to that business or employment and the aircraft does not carry passengers or property for compensation or hire. Another regulation, 14 CFR 119.33 prohibits a person from providing or offering to provide air transportation when that person has control over the operational functions performed in providing that transportation unless that person has an air carrier certificate and operations specifications. Under our regulations, “compensation” has been interpreted very broadly and “need not be direct nor in the form of money. Goodwill is a form of prohibited compensation.” *Administrator v. Murray*, EA–5061, October 29, 2003 citing *Administrator v. Blackburn*, 4 NTSB 409 (1982).

Intangible benefits, such as the expectation of future economic benefit or business, are sufficient to “render a flight one for ‘compensation or hire.’” See, e.g., *Administrator v. Platt*, NTSB Order No. EA–4012 (1993) at 6; *Administrator v. Blackburn*, 4 NTSB 409 (1982), aff’d., *Blackburn v. NTSB*, NTSB, 709 F.2d 1514 (9th Cir. 1983); *Administrator v. Pingel*, NTSB Order No. EA–3265, at n.4 (1991); *Administrator v. Mims*, NTSB Order No. EA–3284 (1991).

rotorcraft external-load operations under certain circumstances over congested areas notwithstanding the requirements of 14 CFR part 91. Therefore, this is consistent with that standard.

We also propose to change the current type certification basis of both model helicopters that excludes the requirement to comply with § 29.855(d). At the time of the application for type certification of the model S-64E helicopter on November 27, 1967, and before the changes to 14 CFR part 29 by Amendment level 29-3, effective February 25, 1968, § 29.855(d) required that cargo and baggage compartments be designed or have a device to ensure detection of fires by a crewmember at his station to prevent entry of harmful substances into the crew or passenger compartment. In Notice 65-42 in Proposal 22 published on December 28, 1965 (30 FR 16129, 16139), we proposed to change § 29.855(d) because experience had shown that the design requirements for cargo and baggage compartments were not specific enough for compartments that are not sealed against fire and for cargo-only compartments. Because of the novel design of this helicopter, it did not have a typical transport category rotorcraft cargo or baggage compartment, only two small baggage compartments in the nose of the rotorcraft that are inaccessible during flight. Therefore, because the model S-64E helicopter was not the type of transport category rotorcraft envisioned when the transport category requirements of 14 CFR part 29 were adopted to address rotorcraft use in air carrier service and the necessary higher degree of safety to protect common carriage passengers and the fact that the model S-64E did have a sealed cargo compartment meeting the new proposed standard in Notice 65-42, the type certification basis for the model S-64E helicopter excluded the requirements of § 29.855(d). However, when Amendment 29-3 was adopted with the amended § 29.855(d), the exclusion of § 29.855(d) from the type certification basis was not reversed. The type certification basis for the model S-64F is the same as that for the model S-64E. Therefore, we propose adding back to the type certification basis for both model helicopters the requirement to comply with § 29.855(d), at Amendment level 29-3, effective February 25, 1968.

### Applicability

This special condition is applicable to the Erickson Air-Crane Model S-64E and Model S-64F rotorcraft. Should Erickson Air-Crane apply later for a change to the type certificate to include

another model incorporating the same novel or unusual design features, this special condition would apply to that model according to the provisions of § 21.101(a)(1).

### Conclusion

We have reviewed the original Special Conditions No. 29-6-EA-2 and No. 29-16-EA-5, including Amendment No. 1. Based on this review, we propose to combine the two current separate special conditions for the Model S-64E and Model S-64F helicopters into a single special condition that clearly establishes the novel or unusual design feature associated with each regulatory requirement. We also propose to change the special condition that limited who, specifically non-flight crewmembers, could be carried on board the helicopter during other than external-load operations. The original special conditions also required the Model S-64E and Model S-64F to be within 5 minutes of a suitable landing area at all times. We find it sufficient to require the rotorcraft to be no more than 5 minutes from a suitable landing area when operating over congested areas.

However, we are proposing to add a requirement to comply with the cargo and baggage compartment requirements of 29.855(d) that were inadvertently omitted from the original two special conditions.

This action affects only certain novel or unusual design features on the Model S-64E and Model S-64F helicopters. It is not a rule of general applicability and affects only the applicant who applied to the FAA for approval of these features on the helicopter.

The substance of the original special conditions may have been subjected to comments in prior instances. However, due to the changes described within the "Discussion" section, we feel that it is prudent to request comments to allow interested persons to submit views on these changes.

### List of Subjects in 14 CFR Parts 21 and 29

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701-44702, 44704.

### The Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes that Special Condition No. 29-6-EA-2, Docket No. 9351, issued January 13, 1969 for the Model S-64E and Special Condition No. 29-16-EA-5, Docket No. 10002, issued December 3, 1969 and

Amendment 1 to Special Condition No. 29-16-EA-5, issued November 13, 1970 for the Model S-64F, be removed and the following special conditions be added as part of the type certification basis for Erickson Air-Crane models S-64E and S-64F helicopters. Unless otherwise noted, all regulatory references made within this proposed special condition would pertain to those 14 CFR part 29 regulations in effect at Amendment level 29-2, effective June 4, 1967 (32 FR 6908, May 5, 1967).

(a) *Takeoff and Landing Distance.* Because of the S-64's novel design as an industrial flying crane, the following apply:

(1) For operations without external load, the takeoff and landing distance must be determined by flight test over the ranges of weight, altitude, and temperature for which takeoff and landing data are scheduled. The flight tests must encompass the critical areas of a takeoff and landing flight path from a 50-foot hover. If the takeoff and landing distance throughout the operational range to be approved are zero, the minimum takeoff and landing area length must be one and one-half times the maximum helicopter overall length (main rotor forward tip path to tail rotor aft tip path) and the area width must be one and one-half times main rotor tip path diameter. Additionally, this information must be furnished in the performance information section of the Rotorcraft Flight Manual.

(2) For Class A rotorcraft load combination operations:

(i) Compliance must be shown with the provisions of § 29.51 (Takeoff data: general), except that in paragraph (a) of § 29.51, the references to §§ 29.53(b) (Critical decision point) and 29.59 (Takeoff path: Category A) are not applicable.

(ii) In lieu of the requirements of §§ 29.53 and 29.59, the following apply:

(A) Compliance must be shown with the provisions of § 29.63 (Takeoff: Category B),

(B) the horizontal takeoff distance to a point 50 feet above the plane of the takeoff surface must be established with both engines operating within their approved limits, and

(C) the takeoff climbout speed must be established.

(iii) Compliance must be shown with the provisions of § 29.79 (Limiting height-speed envelope).

(3) For Class B rotorcraft load combination operations:

(i) Compliance must be shown with § 29.51 (Takeoff data: general), except that in paragraph (a), the references to §§ 29.53(b) (Critical decision point), 29.59 (Takeoff path: Category A) and

29.67(a)(1) and (2) (Climb: one engine inoperative) are not applicable.

(ii) In lieu of the requirements of §§ 29.53 and 29.59, compliance must be shown with the provisions of § 29.63 (Takeoff: Category B).

(b) *Climb.* Because of the S-64's novel design as an industrial flying crane, the following apply:

(1) For Class A rotorcraft load combination operations, in lieu of the requirements of §§ 29.67 (Climb: one engine inoperative) and 29.71

(Helicopter angle of glide: Category B), compliance must be shown with §§ 29.65(a) (Category B climb: all engines operating) and 29.67(a)(1) and (2) (Climb: one engine inoperative).

(2) For Class B rotorcraft load combination operations, in lieu of the requirements of §§ 29.67 (Climb: one engine inoperative) and 29.71 (Helicopter angle of glide: Category B), compliance must be shown with § 29.65 (Category B climb: all engines operating).

(c) *Landing.* Because of the S-64's novel design as an industrial flying crane, for Class A rotorcraft load combination operations, in lieu of the requirements of §§ 29.77 (Balk landing: Category A) and 29.75 (Landing), compliance must be shown for 29.75(b)(5), and the following apply:

(1) The horizontal distance required to land and come to a complete stop, from a point 50 feet above the landing surface must be determined with a level, smooth, dry, hard surface.

(2) The approach and landing may not require exceptional piloting skill or exceptionally favorable conditions.

(3) The landing must be made without excessive vertical acceleration or tendency to bounce, nose over, or ground loop.

(4) The landing data must be determined at each weight, altitude, and temperature for which certification is sought with one engine inoperative and the remaining engine operating within approved operating limitations.

(5) The approach and landing speeds must be selected by the applicant and must be appropriate to the type rotorcraft.

(6) The approach and landing path must be established to avoid the critical areas of a limiting height-speed envelope established under § 29.79.

(d) *Performance at Minimum Operating Speed.* Because of the S-64's novel design as an industrial flying crane, in lieu of the requirements of § 29.73 (Performance at minimum operating speed) the following apply:

(1) For operations without external load, the hovering performance must be determined at 50 feet or more above the

takeoff surface over the ranges of weight, altitude, and temperature for which takeoff data are scheduled. This must be shown with the most critical engine inoperative, the remaining engine at not more than the maximum certificated single engine rated power, and the landing gear extended.

(2) For Class A rotorcraft load combination operations, the hovering performance must be determined over the ranges of weight, altitude, and temperature for which certification is requested, and takeoff data must be scheduled—

(i) Up to takeoff power on each engine;

(ii) With landing gear extended; and

(iii) The helicopter at a height consistent with normal takeoff procedures.

(3) For Class B rotorcraft load combination operations, the hovering performance must be determined over the ranges of weight, altitude, and the temperature for which certification is requested, and takeoff data must be scheduled—

(i) Up to takeoff power on each engine;

(ii) With landing gear extended; and

(iii) The rotorcraft out of ground effect.

(e) *Airspeed Indicating System.*

Because of the S-64's novel design as an industrial flying crane, for operations with and without external load, compliance must be shown with § 29.1323 (Airspeed indicating system) effective February 25, 1968 (Amendment 29-3), modified as follows:

(1) In addition to the flight conditions prescribed in subparagraph (b)(1), the system must be calibrated at operational rates of climb.

(2) In lieu of the speed range prescribed in subparagraph (c)(1), the airspeed error may not exceed the requirements throughout the speed range in level flight at forward airspeeds of 35 knots or more.

(f) *Power Boost and Power-Operated Control System.* Because of the S-64's novel design as an industrial flying crane, for operations without external load, in lieu of the requirements of § 29.695(a)(1) (Power boost and power-operated control system) as it applies to any single failure of the main rotor tandem servo housing, the following apply:

(1) It must be shown by endurance tests of the tandem servo that failure of the servo housing is extremely improbable.

(2) A tandem servo life limit must be established.

(3) A periodic inspection program for the tandem servo must be established.

(4) The hydraulic system must be provided with means to ensure that system pressure, including transient pressure and pressure from fluid volumetric changes in components which are likely to remain closed long enough for such changes to occur—

(i) are within 90 to 110 percent of pump average discharge pressure at each pump outlet or at the outlet of the pump transient pressure dampening device, if provided; and

(ii) may not exceed 135 percent of the design operating pressure, excluding pressures at the outlets specified in subparagraph (i) above. Design operating pressure is the maximum steady operating pressure.

(g) *Propulsion Conditions.* Because of the S-64's novel design as an industrial flying crane, its powerplant was designed without a cowling, and does not include a fire extinguishing system. Therefore, in lieu of the requirements of §§ 29.861(a) (Fire protection of structure, controls, and other parts), 29.1187(e) (Drainage and ventilation of fire zones), 29.1195 (Fire extinguishing systems), 29.1197 (Fire extinguishing agents), 29.1199 (Extinguishing agent containers), and 29.1201 (Fire extinguishing system materials), the following apply:

(1) *Fire protection of structure, control and other parts.* Compliance must be shown with § 29.861(b) (Fire protection of structure, controls, and other parts) so each part of the structure, controls, rotor mechanism, and other parts essential to controlled landing and flight must be protected so they can perform their essential functions for at least 5 minutes under any foreseeable powerplant fire condition.

(2) *Powerplant fire protection.* In addition to compliance with § 29.1183 (Lines and fittings), except for lines and fittings approved as part of the engine type certificate under 14 CFR part 33, design precautions must be taken in the powerplant compartment to safeguard against the ignition of fluids or vapors which could be caused by leakage or failure in flammable fluid systems.

(3) *Exhaust system drains.* In addition to compliance with § 29.1121 (Exhaust system: general), compliance must be shown with § 29.1121(h) (Exhaust system: general) effective February 25, 1968 (Amendment 29-3) in that if there are significant low spots or pockets in the engine exhaust system, the system must have drains that discharge clear of the rotorcraft, in normal ground and flight attitudes, to prevent the accumulation of fuel after the failure of an attempted engine start.

(4) *Rotor drive system testing.* If the engine power output to the transmission can exceed the highest engine or transmission power rating and the output is not directly controlled by the pilot under normal operating conditions (such as the control of the primary engine power control by the flight control), in addition to the endurance tests prescribed in § 29.923 (Rotor drive system and control mechanism tests), the following test must be made:

(i) With all engines operating, apply torque at least equal to the maximum torque used in meeting § 29.923 plus 10 percent for at least 220 seconds.

(ii) With each engine, in turn, inoperative, apply to the remaining transmission power inputs the maximum torque attainable under probable operating conditions, assuming that torque limiting devices are functioning properly. Each transmission input must be tested at this maximum torque for at least 5 minutes.

(5) *Powerplant installation.* In addition to the requirements of § 29.901 (Installation), compliance must be shown with § 29.901(b)(5) (Installation) effective February 25, 1968 (Amendment 29-3) in that the axial and radial expansion of the engines may not affect the safety of the powerplant installation.

(6) *Powerplant operation characteristics.* In addition to the requirements of § 29.939 (Turbine engine operating characteristics), the powerplant operating characteristics must be investigated in flight to determine that no adverse characteristics, such as stall, surge, or flameout are present to a hazardous degree during normal and emergency operation of the helicopter within the range of operating limitations of the helicopter and of the engine.

(7) *Powerplant control system.* In addition to the requirements of § 29.1141 (Powerplant controls: general), the powerplant control system must be investigated to ensure that no single, likely failure or malfunction in the helicopter installed components of the system can cause a hazardous condition that cannot be safely controlled in flight.

(8) *Fuel pump installation.* In addition to the requirements of § 29.991 (Fuel pumps), there must be provisions to maintain the fuel pressure at the inlet of the engine fuel system within the limits established for engine operation throughout the operating envelope of the helicopter.

(9) *Fuel strainer.* In addition to the requirements of § 29.997 (Fuel strainer or filter), compliance must be shown with § 29.997(e) (Fuel strainer or filter)

effective February 25, 1968 (Amendment 29-3) in that unless there are means in the fuel system to prevent the accumulation of ice on the filter, there must be means to automatically maintain the fuel flow if ice-clogging of the filter occurs.

(10) *Cooling test.* In lieu of the requirements of § 29.1041(a) (Powerplant cooling: General), which includes requirements for reciprocating engines, compliance must be shown with § 29.1041(a) (Powerplant cooling: General) effective February 25, 1968 (Amendment 29-3) in that the powerplant cooling provisions must maintain the temperatures of powerplant components and engine fluids within safe values under critical surface and flight operating conditions and after normal engine shutdown.

(11) *Induction system icing protection.* The S-64 has two turbine engines; therefore, in lieu of § 29.1093 (Induction system icing protection), which includes requirements for reciprocating engines, compliance must be shown with § 29.1093(b) (Induction system icing protection) effective February 25, 1968 (Amendment 29-3) in that each engine must operate throughout its flight power range, without adverse effect on engine operation or serious loss of power or thrust under the icing conditions specified in Appendix C of 14 CFR part 25.

(12) *Induction system duct.* The S-64 has two turbine engines; therefore, in lieu of § 29.1091(d) and (e) (Air induction), which includes requirements for reciprocating engines, compliance must be shown with § 29.1091(f) (Air induction) effective February 25, 1968 (Amendment 29-3) in that:

(i) There must be means to prevent hazardous quantities of fuel leakage or overflow from drains, vents, or other components of flammable fluid systems from entering the engine intake system.

(ii) The air inlet ducts must be located or protected to minimize the ingestion of foreign matter during takeoff, landing, and taxiing.

(h) *Powerplant Instruments.* At the time of original certification, the S-64 had a novel design of being powered by two turbine engines; therefore, in lieu of § 29.1305 (Powerplant instruments), which includes requirements for reciprocating engines, compliance must be shown with § 29.1305 (Powerplant instruments) effective February 25, 1968 (Amendment 29-3) in that the following are required powerplant instruments:

(1) A fuel quantity indicator for each fuel tank.

(2) If an engine can be supplied with fuel from more than one tank, a warning device to indicate, for each tank, when a 5-minute usable fuel supply remains when the rotorcraft is in the most adverse fuel feed condition for that tank, regardless of whether that condition can be sustained for the 5 minutes.

(3) An oil pressure warning device for each pressure lubricated gearbox to indicate when the oil pressure falls below a safe value.

(4) An oil quantity indicator for each oil tank and each rotor drive gearbox, if lubricant is self-contained.

(5) An oil temperature indicator for each engine.

(6) An oil temperature warning device for each main rotor drive gearbox to indicate unsafe oil temperatures.

(7) A gas temperature indicator for each turbine engine.

(8) A gas producer rotor tachometer for each turbine engine.

(9) A tachometer for each engine that, if combined with the instrument required by subparagraph (10) of this paragraph, indicates rotor rpm during autorotation.

(10) A tachometer to indicate the main rotor rpm.

(11) A free power turbine tachometer for each engine.

(12) A means for each engine to indicate power for that engine.

(13) An individual oil pressure indicator for each engine, and either an independent warning device for each engine or a master warning device for the engines with means for isolating the individual warning circuit from the master warning device.

(14) An individual fuel pressure indicator or equivalent device for each engine, and either an independent warning device for each engine or a master warning device for the engines with means for isolating the individual warning circuit from the master warning device.

(15) Fire warning indicators.

(i) *Cargo and baggage compartments.* Since the S-64 includes an unusual design in that the baggage compartments are located in the nose of the airframe and are inaccessible during flight, in lieu of § 29.855(d), compliance must be shown with § 29.855(d) effective February 25, 1968 (Amendment 29-3) so that each cargo and baggage compartment is sealed to contain cargo or baggage compartment fires completely without endangering the safety of the rotorcraft or its occupants.

(j) *Auxiliary Control Station.* The S-64 includes a novel design for an optional aft-facing pilot position (auxiliary control station) which is used during precision placement rotorcraft

load combination operations. There are no specific requirements in the airworthiness standards for this type of pilot position. Therefore, if the auxiliary control station is equipped with flight controls—

(1) The rotorcraft must be safely controllable by the auxiliary controls, throughout the range of the auxiliary controls.

(2) The auxiliary controls may not interfere with the safe operation of the rotorcraft by the pilot or copilot when the station is not occupied.

(3) The auxiliary control station and its associated equipment must allow the operator to perform his or her duties without unreasonable concentration or fatigue.

(4) The vibration and noise characteristics of the auxiliary control station appurtenances must not interfere with the operator's assigned duties to an extent that would make the operation unsafe.

(5) The auxiliary control station must be arranged to give the operator sufficiently extensive, clear, and undistorted view for safe operation. The station must be free of glare and reflection that could interfere with the operator's view.

(6) There must be provisions to prevent unintentional movement of the controls when the rear-facing aft-stick operator's seat is occupied by other than essential crewmembers during other than external-load operations.

(k) *Quick-Release Devices.* The S-64 is specifically designed for rotorcraft load combination operations with particular weight-specified hard points designed into the airframe. Because of this unusual design, when quick release devices are required under 14 CFR part 133, it must enable the pilot to release the external-load quickly during flight. The quick-release system must comply with the following:

(1) An activating control for the quick-release system must be installed on one of the pilot's primary controls and must be designed and located so it may be operated by the pilot without hazardously limiting his or her ability to control the rotorcraft during an emergency situation.

(2) An alternative independent activating control for the quick-release system must be provided and must be readily accessible to the pilot or a crewmember.

(3) The design of the quick-release system must ensure that failure, which could prevent the release of external loads, is extremely improbable.

(4) The quick-release system must be capable of functioning properly after failure of all engines.

(5) The quick-release system must function properly with external loads up to and including the maximum weight for which certification is requested.

(6) The quick-release system must include a means to check for proper operation of the system at established intervals.

(l) *Maximum Weight with External Load.* When establishing compliance with § 29.25, the maximum weight of the rotorcraft-load combination for operations with external loads must be established by the applicant and may not exceed the weight at which compliance with all applicable requirements has been shown.

(m) *External Load Jettisoning.* The external load must be jettisonable to the maximum weight for which the helicopter has been type certificated for operation without external loads or with Class A loads.

(n) *Minimum Flight Crew.* To meet the requirements of § 29.1523, the minimum flight crew consists of a pilot and a copilot. For pick up of the external-load and on-site maneuvering and release of the external-load, the copilot may act as the aft-facing hoist operator.

(o) *Occupancy.* When engaged in operations other than external-load operations under 14 CFR part 133, the carriage of passengers in the two observer seats and the rear-facing aft-stick operator's seat, when the aft-stick operator's controls are disengaged and the collective guard is installed, will be controlled by the FAA operating requirements applicable to that particular operation.

(p) *Operations.* The S-64 meets the Category B fire protection requirements for structures and controls in lieu of Category A requirements. Therefore, when operating over congested areas, the rotorcraft must be operated at an altitude and over routes that provide suitable landing areas that can be reached in no more than 5 minutes.

(q) *Markings and Placards.* For purposes of rotorcraft load combination operations, the following markings and placards must be displayed conspicuously and must be applied so they cannot be easily erased, disfigured, or obscured.

(1) A placard, plainly visible to appropriate crewmembers, referring to the helicopter flight manual limitations and restrictions for rotorcraft load combinations allowed under 14 CFR part 133.

(2) A placard, marking, or instructions (displayed next to the external-load attaching means) stating the maximum external-load prescribed as an operating limitation for rotorcraft load

combinations allowed under 14 CFR part 133.

(3) A placard in the cockpit prescribing the occupancy limitation during rotorcraft load combination operations under 14 CFR part 133.

Issued in Fort Worth, TX, on December 17, 2009.

**Mark R. Schilling,**

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2009-1215; Directorate Identifier 2009-NM-126-AD]

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Model A330-200 and -300, and Model A340-200, -300, -500 and 600 Series Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

\* \* \* [P]artial blockage of the water absorbing filter element P/N (part number) QA06123 was observed several times. The blockage was created by carbon debris from the cartridge and from the burst disc of the Halon bottle.

This water absorbing filter element is part of Halon Dual-Filter Assembly installed also in the Flow Metering System (FMS) of the cargo compartment Fire Extinguishing System used in the A330 and A340 aeroplanes.

Blockage of the water absorbing filter element could lead to reduction of Halon outflow, leading to incapacity to maintain fire extinguishing agent concentration. Combined with fire, this could result in an uncontrolled fire in the affected compartment, which would constitute an unsafe condition.

\* \* \* \* \*

The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

**DATES:** We must receive comments on this proposed AD by February 12, 2010.