Proposed Rules

Federal Register
Vol. 62, No. 25
Thursday, February 6, 1997

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. 136CE, Special Condition 23–ACE–88]

Special Conditions; Ballistic Recovery Systems Cirrus SR–20 Installation

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This notice proposes special conditions for the type certification of the Ballistic Recovery Systems, Inc., (BRS) parachute recovery system installed in the Cirrus SR–20 Model airplane. This system is referred to as the General Aviation Recovery Device (GARD). Airplanes modified to use this system will incorporate novel or unusual design features for which the applicable airworthiness regulations do not contain adequate or appropriate safety standards. These special conditions contain the additional airworthiness standards that the Administrator considers necessary to establish a level of safety equivalent to the original certification basis for these airplanes.

DATES: Comments must be received on or before March 10, 1997.

ADDRESSES: Comments on this proposal may be mailed in duplicate to: Federal Aviation Administration, Office of the Assistant Chief Counsel, ACE–7, Attention: Rules Docket Clerk, Docket No. 136CE, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106. All comments must be marked: Docket No. 136CE. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Lowell Foster, Aerospace Engineer, Standards Office (ACE–110), Small Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, 601 East 12th Street, Kansas City, Missouri 64106; telephone (816) 426–5688.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of these special conditions by submitting such written data, views, or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in duplicate to the address specified above. All communication received on or before the closing date for comments specified above will be considered by the Administrator before taking further rulemaking action on this proposal. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. 136CE.'' The postcard will be date stamped and returned to the commenter. The proposals contained in this notice may be changed in light of the comments received. All comments received will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Background

On March 7, 1996, Cirrus Design, 4515 Taylor Circle, Duluth, MN 55811, filed an application for a type certificate (TC). Included in this TC application was the provision to install the BRS GARD parachute recovery system as standard equipment on each Cirrus Model SR–20 airplane. The parachute recovery system is intended to recover an airplane in emergency situations such as mid-air collision, loss of engine power, loss of airplane control, severe structural failure, pilot disorientation, or pilot incapacitation with a passenger on board. The GARD system, which is only used as a last resort, is intended to prevent serious injuries to the airplane occupants by parachuting the airplane to the ground.

The parachute recovery system consists of a parachute packed in a canister mounted on the airframe. A solid propellant rocket motor deploys the canopy and is located on the side of the canister. A door positioned above the canister seals the canister, parachute canopy, and rocket motor from the elements and provides free exit when the canopy is deployed. The system is deployed by a mechanical pull handle mounted so that the pilot and passenger can reach it. At least two separate and independent actions are required to deploy the system.

A multi-cable bridle attaches the canopy bridle to the airplane primary structure. The cable lengths are sized to provide the best airplane touchdown attitude. The cables are routed from the parachute canister thru the fuselage and run externally to the fuselage attach points. The external portion of these cables are covered with small frangible fairings.

Discussion

Special conditions may be issued and amended, as necessary, as part of the type certification basis if the Administrator finds that the airworthiness standards designated in accordance with § 21.101(b)(1) do not contain adequate or appropriate safety standards because of the novel and unusual design features of the airplane modification. Special conditions, as appropriate, are issued after public notice in accordance with § 11.49 (as amended September 25, 1989), as required by §§ 11.28 and 11.29(b). The special conditions become part of the type certification basis, as provided by § 21.17(a)(2).

The installation of parachute recovery systems in 14 CFR part 23 airplanes was not envisioned when the certification basis for these airplanes was established. In addition, the Administrator has determined that current regulations do not contain adequate or appropriate safety standards for a parachute recovery system; therefore, this system is considered a novel and unusual design feature. The flight test demonstration requirements will ensure that the parachute recovery system will perform its intended function without exceeding its strength capabilities. Demonstrations will be required to show that the parachute will deploy in specified flight conditions at both ends of the flight envelope. These conditions are a high speed deployment and deployment during a one-turn spin entry. If the airplane is spin resistant,

the condition is the maneuver that results from pro-spin control inputs held for one turn, or three seconds, whichever comes first.

Occupant restraint requirements will ensure that the airplane is equipped with a restraint system designed to protect the occupants from injury during parachute deployment and ground impact. Each occupant seat must meet the requirements of 14 CFR part 23, § 23.562 as part of the original certification basis.

Requirements for parachute performance will ensure all of the following: (a) The parachute complies with the applicable section of TSO-C23c (SAE AS8015A) at the maximum airplane weights. (b) The parachute deployment loads do not exceed the structural strength of the airplane. (c) The system will provide a ground impact that does not result in serious injury of the passengers. (d) The system will operate in adverse weather conditions.

The requirements for the functions and operations of the parachute recovery system will ensure all of the following: (a) There is no fire hazard associated with the system. (b) The failure of this system has to be shown to be extremely improbable. The installation of this system allows relief from another part 23 requirement, spins. For this reason, it will need to be a dispatch item and have a high level of reliability. (c) That the system will work in all adverse weather conditions that the airplane is approved to operate in, including the IFR and icing environments. (d) The sequence of arming and activating the system will prevent inadvertent deployment. (e) The system can be activated from either the pilot's or the copilot's position by various sized people. (f) The system will be labeled to show its identification function and operating limitations. (g) A warning placard will be located on the fuselage near the rocket motor to warn rescue crews of the ballistic system. (h) The FAA-approved flight manual will include a thorough explanation of system's operation and limitations as well as the safe deployment envelope. (i) The occupants are protected from serious injury after touchdown in adverse weather.

Requirements for protection of the parachute recovery system will ensure the following: the system is protected from deterioration due to weathering, corrosion, and abrasion; provisions are made to provide adequate ventilation and drainage of the airplane structure that houses the parachute canister.

Requirements for a system inspection provision will ensure that adequate means are available to permit examination of the parachute recovery system components and that instructions for continued airworthiness are provided.

Requirements for the system to function throughout the entire operational flight envelope are incorporated because it is reasonable to expect pilots to deploy the system any time that there is a catastrophic failure.

Requirements for operating limitations of the parachute recovery system will ensure that the system operating limitations and deployment envelope are prescribed, including inspection, repacking, and replacing the system's parachute deployment mechanism at approved intervals.

Conclusion

This action affects only novel and unusual design features on specified model/series airplanes. It is not a rule of general applicability and affects only those applicants who apply to the FAA for approval of these features on these airplanes.

List of Subjects in 14 CFR Part 23

Aircraft, Aviation safety, Signs and symbols.

Citation

The authority citation for this special condition is as follows:

Authority: 49 U.S.C. 106(g), 40113 and 44701; 14 CFR 21.16 and 101; and 14 CFR 11.28 and 11.49

The Proposed Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes the following special conditions as part of the type certification basis for the Cirrus Model SR–20 airplanes:

1. Flight Test Demonstration

(a) The system must be demonstrated in flight to satisfactorily perform its intended function, without exceeding the system deployment design loads, for the critical flight conditions.

(b) Satisfactory deployment of the parachute must be demonstrated, at the most critical airplane weight and balance, for the following flight conditions:

(1) One of the two maneuvers, (i) or (ii), must be performed for the low speed end of the flight envelope;

(i) Spin with deployment at one turn or 3 seconds, whichever is longer; or (ii) Deployment immediately following the maneuver that results from a pro-spin control input held for one turn or 3 seconds, whichever is longer.

(2) Never exceed speed with 1g normal load.

2. Occupant Restraint

Each seat in the airplane must be equipped with a restraint system, consisting of a seat belt and shoulder harness, that will protect the occupants from head and upper torso injuries during parachute deployment and ground impact at the critical load conditions.

3. Parachute Performance

(a) The parachute must comply with the applicable requirements of TSO–C23c, or an approved equivalent, for the maximum airplane weight at paragraph 1(b)(2).

(b) The loads during deployment must not exceed 80 percent of the ultimate design load for the attaching structure, the cabin structure surrounding the occupants, and any interconnecting structure of the airplane.

(c) It must be shown that, although the airplane structure may be damaged, the airplane impact during touchdown will result in an occupant environment in which serious injury to the occupants is improbable.

(d) It must be shown that, with the parachute deployed, the airplane can impact the ground in various adverse weather conditions, including winds up to 15 knots, without endangering the airplane occupants.

4. System Function and Operations

(a) It must be shown that there is no fire hazard associated with activation of the system.

(b) The system must be shown to perform its intended function and system failure must be shown to be extremely improbable.

(c) It must be shown that reliable and functional deployment in the adverse weather conditions that the airplane is approved for have been considered. For example, if the aircraft is certified for flight into known icing, and flight test in actual icing reveals that ice may cover the deployment area, then the possible adverse effects of ice or an ice layer covering the parachute deployment area should be analyzed.

(d) It must be shown that arming and activating the system can only be accomplished in a sequence that makes inadvertent deployment extremely improbable.

(e) It must be demonstrated that the system can be activated without difficulty by various sized people, from a 10th percentile female to a 90th percentile male, while sitting in the pilot or copilot seat.

(f) The system must be labeled to show its identification, function, and operating limitations.

(g) A warning placard must be located on the fuselage near the rocket motor warning of the rocket.

(h) The FAA-approved flight manual must include a thorough explanation of operation and limitations as well as the safe deployment envelope.

(i) It must be shown that the occupants will be protected from serious injury after touchdown under various adverse weather conditions, including high winds.

5. System Protection

(a) All components of the system must provide protection against deterioration due to weathering, corrosion, and abrasion.

(b) Adequate provisions must be made for ventilation and drainage of the parachute canister and associated structure to ensure the sound condition of the system.

6. System Inspection Provisions

(a) Instructions for continued airworthiness must be prepared for the system that meet the requirements of § 23.1529.

(b) Adequate means must be provided to permit the close examination of the parachute and other system components to ensure proper functioning, alignment, lubrication, and adjustment during the required inspection of the system.

7. Operating Limitations

(a) Operating limitations must be prescribed to ensure proper operation of the system within its deployment envelope. A detailed discussion of the system, including operation, limitations and deployment envelope must be included in the Airplane Flight Manual.

(b) The deployment envelope of the GARD system must be the same as the normal operating envelope of the airplane.

(c) Operating limitations must be prescribed for inspecting, repacking, and replacing the parachute and deployment mechanism at approved intervals.

Issued in Kansas City, Missouri on January 21, 1997.

Henry A. Armstrong,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 97–2960 Filed 2–5–97; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

30 CFR Parts 56, 57, 62, 70, and 71

RIN 1219–AA53

Health Standards for Occupational Noise Exposure

AGENCY: Mine Safety and Health Administration, (MSHA) Labor.

ACTION: Proposed rule; extension of comment period and notice of hearings.

SUMMARY: MSHA is extending the period for public comment regarding the Agency's proposed rule for occupational noise exposure, which was published in the Federal Register on December 17, 1996. The Agency also is announcing that it intends to hold public hearings. These hearings will be held under section 101 of the Federal Mine Safety and Health Act of 1977. The rulemaking record will remain open until June 16, 1997.

DATES: Comments must be received on or before April 21, 1997. All requests to make oral presentations for the record should be submitted at least 5 days prior to each hearing date. However, you do not have to give a written request to be provided an opportunity to speak. The public hearings are scheduled to be held at the following locations on the dates indicated:

May 6, 1997–Beaver, West Virginia (Beckley)
May 8, 1997–St. Louis, Missouri
May 13, 1997–Denver, Colorado
May 15, 1997–Las Vegas, Nevada
May 20, 1997–Atlanta, Georgia
May 22, 1997–Washington, DC

Each hearing will last from 9:00 a.m. to 5:00 p.m., but will continue into the evening if necessary.

The record will remain open after the hearings until June 16, 1997.

ADDRESSES: Comments on the proposed rule may be transmitted by electronic mail, fax, or mail. Comments by electronic mail must be clearly identified as such and sent to this e-mail address: noise@msha.gov. Comments by fax must be clearly identified as such and sent to: MSHA, Office of Standards, Regulations, and Variances, 703–235–5551. Send mail comments to: MSHA, Office of Standards, Regulations, and Variances, Room 631, 4015 Wilson Boulevard, Arlington, VA 22203–1984, or any MSHA district or field office. The Agency will have copies of the proposal available for review by the mining public at each district and field office location, and each technical support center. The document will also be available for loan to interested members of the public on an as needed basis. MSHA will also accept written comments from the mining public in the field and district offices and technical support centers. These comments will be a part of the official rulemaking record. Interested persons are encouraged to supplement written comments with computer files or disks; please contact the Agency with any questions about format.

Send requests to make oral presentations to: MSHA, Office of Standards, Regulations, and Variances, Room 631, 4015 Wilson Boulevard, Arlington, VA 22203–1984.

The hearings will be held at the following locations:

May 6, 1997, National Mine Health & Safety Academy, Auditorium, 1301 Airport Road, Beaver, West Virginia (Beckley) 25813.

May 8, 1997, Harley Hotel, North Ballroom, 3400 Rider Trail South, St. Louis, Missouri 63134.

May 13, 1997, Four Points Sheraton Hotel, Mount Evans Room, 3535 Quebec Street, Denver, Colorado 80207.

May 15, 1997, Quality Inn, 377 E. Flamingo Road, Las Vegas, Nevada 89109.

May 20, 1997, Holiday Inn Airport, 5010 Old National Highway, Atlanta, Georgia 30349.

May 22, 1997, Department of Labor, Frances Perkins Building, Auditorium, 200 Constitution Avenue, NW., Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT: Patricia W. Silvey, Director, Office of Standards, Regulations, and Variances, MSHA, phone 703–235–1910.

SUPPLEMENTARY INFORMATION: On December 17, 1996, MSHA published in the Federal Register (61 FR 66348) a proposed rule to revise the Agency's existing health standards for occupational noise, allowing 60 days for public comment. The Agency has received a number of requests from the mining community to extend the period for comment. These requests include a range of from 15 to 180 additional days. The comment period was scheduled to close on February 18, 1997. MSHA does not believe that an extension of 180 days (until August 17, 1997) is warranted. The Agency believes that a more reasoned response is an extension until April 21, 1997, an additional 60 days beyond the original comment period. The Agency believes that this extension will provide sufficient time for all interested parties to review and comment on the proposal, and does not