

Note: This section will not appear in the Code of Federal Regulations.

§ 985.219 Salable quantities and allotment percentages—2000–2001 marketing year.

The salable quantity and allotment percentage for each class of spearmint oil during the marketing year beginning on June 1, 2000, shall be as follows:

(a) Class 1 (Scotch) oil—a salable quantity of 1,211,207 pounds and an allotment percentage of 65 percent.

(b) Class 3 (Native) oil—a salable quantity of 1,033,648 pounds and an allotment percentage of 50 percent.

Dated: December 7, 2000.

Robert C. Keeney,

Deputy Administrator, Fruit and Vegetable Programs.

[FR Doc. 99–32232 Filed 12–10–99; 8:45 am]

BILLING CODE 3410–02–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM167; Notice No. 25–99–10–SC]

Special Conditions: Boeing Model 777 Series Airplanes; Seats With Inflatable Lapbelts

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This notice proposes special conditions for Boeing Model 777 series airplanes. These airplanes as modified by BF Goodrich Aerospace will have novel and unusual design features associated with seats with inflatable lapbelts. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. The proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: Comments must be received on or before January 27, 2000.

ADDRESSES: Comments on this proposal may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, Attention: Rules Docket (ANM–114), Docket No. NM167, 1601 Lind Avenue SW., Renton, Washington 98055–4506; or delivered in duplicate to the Transport Airplane Directorate at the above address. Comments must be marked: Docket No. NM167. Comments may be inspected in the Rules Docket weekdays, except

Federal holidays, between 7:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT: Jeff Gardlin, Airframe and Cabin Safety Branch, ANM–115, Transport Airplane Directorate, Aircraft Certification Service, FAA, 1601 Lind Avenue SW., Renton, Washington 98055–4056; telephone (425) 227–2136; facsimile (425) 227–1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of these proposed 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 communications received on or before the closing date for comments will be considered by the Administrator. The proposals described in this notice may be changed in light of the comments received. All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Persons wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include with those comments a self-addressed, stamped postcard on which the following statement is made: “Comments to Docket No. NM167.” The postcard will be date stamped and returned to the commenter.

Background

On March 31, 1999, BF Goodrich Aerospace, 3420 South 7th Street, Suite 1, Phoenix, Arizona 85040, applied for a supplemental type certificate to install inflatable lapbelts for head injury protection on certain seats in Boeing Model 777 series airplanes. The Model 777 series airplane is a swept-wing, conventional-tail, twin-engine, turbofan-powered transport. The inflatable lapbelt is designed to limit occupant forward excursion in the event of an accident. This will reduce the potential for head injury, thereby reducing the Head Injury Criteria (HIC) measurement. The inflatable lapbelt behaves similarly to an automotive airbag, but in this case the airbag is integrated into the lapbelt, and deploys away from the seated occupant. While airbags are now standard in the automotive industry, the use of an inflatable lapbelt is novel for commercial aviation.

Title 14 Code of Federal Regulations (14 CFR) § 25.785 requires that occupants be protected from head injury by either the elimination of any injurious object within the striking radius of the head, or by padding. Traditionally, this has required a set back of 35” from any bulkhead or other rigid interior feature or, where not practical, specified types of padding. The relative effectiveness of these means of injury protection was not quantified. With the adoption of Amendment 25–64 to 14 CFR part 25, specifically § 25.562, a new standard that quantifies required head injury protection was created.

Title 14 CFR 25.562 specifies that dynamic tests must be conducted for each seat type installed in the airplane. In particular, the regulations require that persons not suffer serious head injury under the conditions specified in the tests, and that a HIC measurement of not more than 1000 units be recorded, should contact with the cabin interior occur. While the test conditions described in this section are specific, it is the intent of the requirement that an adequate level of head injury protection be provided for crash severity up to and including that specified.

Amendment 25–64 is part of the Model 777 certification basis. Therefore, the seat installation with inflatable lapbelts must meet the HIC requirement. The FAA will require that a HIC of less than 1000 be demonstrated for occupants of seats incorporating the inflatable lapbelt.

Because § 25.562 and associated guidance do not adequately address seats with inflatable lapbelts, the FAA recognizes that appropriate pass/fail criteria need to be developed that do fully address the safety concerns specific to occupants of these seats.

The inflatable lapbelt has two potential advantages over other means of head impact protection. First, it can provide essentially equivalent protection for occupants of all stature, and second, it can provide significantly greater protection than would be expected with energy absorbing pads, for example. These are significant advantages from a safety standpoint, since such devices will likely provide a level of safety that exceeds the minimum standards of the Federal Aviation Regulations (FAR). Conversely, airbags in general are active systems, and must be relied upon to activate properly when needed, as opposed to an energy absorbing pad or upper torso restraint that is passive, and always available. These potential advantages must be balanced against the potential problems in order to develop standards

that will provide an equivalent level of safety to that intended by the regulations.

The FAA has considered the installation of inflatable lapbelts to have two primary safety concerns: first, that they perform properly under foreseeable operating conditions, and second that they do not perform in a manner or at such times as would constitute a hazard to the airplane or occupants. This latter point has the potential to be the more rigorous of the requirements, owing to the active nature of the system. With this philosophy in mind, the FAA has considered the following as a basis for the special conditions.

The inflatable lapbelt will rely on electronic sensors for signaling and pyrotechnic charges for activation so that it is available when needed. These same devices could be susceptible to inadvertent activation, causing deployment in a potentially unsafe manner. The consequences of such deployment must be considered in establishing the reliability of the system. BF Goodrich Aerospace must substantiate that the effects of an inadvertent deployment in flight are either not a hazard to the airplane, or that such deployment is an extremely improbable occurrence (less than 10^{-9} per flight hour). The effect of an inadvertent deployment on a passenger or crewmember that might be positioned close to the airbag should also be considered. The person could be either standing or sitting. A minimum reliability level will have to be established for this case, depending upon the consequences, even if the effect on the airplane is negligible.

The potential for an inadvertent deployment could be increased as a result of conditions in service. The installation must take into account wear and tear so that the likelihood of an inadvertent deployment is not increased to an unacceptable level. In this context, an appropriate inspection interval and self-test capability are considered necessary. Other outside influences are lightning and high intensity electromagnetic fields (HIRF). Since the sensors that trigger deployment are electronic, they must be protected from the effects of these threats. Existing Special Conditions No. 25-ANM-78 regarding lightning and HIRF are therefore applicable. For the purposes of compliance with those special conditions, if inadvertent deployment could cause a hazard to the airplane, the airbag is considered a critical system; if inadvertent deployment could cause injuries to persons, the airbag should be considered an essential system. Finally, the airbag installation should be

protected from the effects of fire, so that an additional hazard is not created by, for example, a rupture of the pyrotechnic squib.

In order to be an effective safety system, the airbag must function properly and must not introduce any additional hazards to occupants as a result of its functioning. There are several areas where the airbag differs from traditional occupant protection systems, and requires special conditions to ensure adequate performance.

Because the airbag is essentially a single use device, there is the potential that it could deploy under crash conditions that are not sufficiently severe as to require head injury protection from the airbag. Since an actual crash is frequently composed of a series of impacts, this could render the airbag useless if a larger impact follows the initial impact. This situation does not exist with energy absorbing pads or upper torso restraints, which tend to provide protection according to the severity of the impact. Therefore, the airbag installation should be such that the airbag will provide protection when it is required, and will not expend its protection when it is not needed. There is no requirement for the airbag to provide protection for multiple impacts, where more than one impact would require protection.

Since each occupant's restraint system provides protection for that occupant only, the installation must address seats that are unoccupied. It will be necessary to show that the required protection is provided for each occupant regardless of the number of occupied seats, and considering that unoccupied seats may have lapbelts that are active.

Since a wide range of occupants could occupy a seat, the inflatable lapbelt should be effective for a wide range of occupants. The FAA has historically considered the range from the 5th percentile female to the 95th percentile male as the range of occupants that must be taken into account. In this case, the FAA is proposing consideration of a larger range of occupants, due to the nature of the lapbelt installation and its close proximity to the occupant. In a similar vein, these persons could have assumed the brace position, for those accidents where an impact is anticipated. Test data indicate that occupants in the brace position do not require supplemental protection, and so it would not be necessary to show that the inflatable lapbelt will enhance the brace position. However, the inflatable lapbelt must not introduce a hazard in that case by deploying into the seated, braced occupant.

Another area of concern is the use of seats so equipped by children whether lap-held, in approved child safety seats, or occupying the seat directly. The installation needs to address the use of the inflatable lapbelt by children, either by demonstrating that it will function properly, or by adding appropriate limitation on usage. Another concern is if the seat is occupied by a pregnant woman.

Since the inflatable lapbelt will be electrically powered, there is the possibility that the system could fail due to a separation in the fuselage. Since this system is intended as crash/post-crash protection means, failure due to fuselage separation is not acceptable. As with emergency lighting, the system should function properly if such a separation occurs at any point in the fuselage. A separation that occurs at the location of the inflatable lapbelt would not have to be considered.

Since the inflatable lapbelt is likely to have a large volume displacement, the inflated bag could potentially impede egress of passengers. Since the bag deflates to absorb energy, it is likely that an inflatable lapbelt would be deflated at the time that persons would be trying to leave their seats. Nonetheless, it is considered appropriate to specify a time interval after which the inflatable lapbelt may not impede rapid egress. Ten seconds has been chosen as a reasonable time since this corresponds to the maximum time allowed for an exit to be openable. In actuality, it is unlikely that an exit would be prepared this quickly in an accident severe enough to warrant deployment of the inflatable lapbelt, and the inflatable lapbelt will likely deflate much quicker than ten seconds.

Type Certification Basis

Under the provisions of 14 CFR 21.101, BF Goodrich Aerospace must show that the Model 777 series airplanes, as changed, continue to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. T00001SE or the applicable regulations in effect on the date of application for the change. The regulations incorporated by reference in the type certificate are commonly referred to as the "original type certification basis." The regulations incorporated by reference in Type Certificate No. T00001SE are as follows: Amendments 25-1 through 25-82 for the Model 777-200 and Amendments 25-1 through 25-86 with exceptions for the Model 777-300. The U.S. type certification basis for the Model 777 is established in accordance with 14 CFR 21.29 and 21.17 and the type

certification application date. The U.S. type certification basis is listed in Type Certificate Data Sheet No. T00001SE.

If the Administrator finds that the applicable airworthiness regulations (*i.e.*, 14 CFR part 25 as amended) do not contain adequate or appropriate safety standards for Boeing Model 777 series airplanes because of a novel or unusual design feature, special conditions are prescribed under the provisions of 14 CFR 21.16.

In addition to the applicable airworthiness regulations and special conditions, the Boeing Model 777 must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36.

Special conditions, as appropriate, are issued in accordance with 14 CFR § 11.49 after public notice, as required by 14 CFR 11.28 and 11.29(b), and become part of the type certification basis in accordance with 14 CFR 21.101(b)(2).

Special conditions are initially applicable to the model for which they are issued. Should the applicant apply for a supplemental type certificate to modify any other model included on the same type certificate to incorporate the same novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101(a)(1).

Novel or Unusual Design Features

The Model 777 series airplanes will incorporate the following novel or unusual design features: BF Goodrich is proposing to install an inflatable lapbelt on certain seats of Boeing Model 777 series airplanes, in order to reduce the potential for head injury in the event of an accident. The inflatable lapbelt works similar to an automotive airbag, except that the airbag is integrated with the lap belt of the restraint system.

The FAR states the performance criteria for head injury protection in objective terms. However, none of these criteria are adequate to address the specific issues raised concerning seats with inflatable lapbelts. The FAA has therefore determined that, in addition to the requirements of 14 CFR part 25, special conditions are needed to address requirements particular to installation of seats with inflatable lapbelts.

Accordingly, in addition to the passenger injury criteria specified in 14 CFR 25.785, these special conditions are proposed for the Boeing Model 777 series airplanes equipped with inflatable lapbelts. Other conditions may be developed, as needed, based on further FAA review and discussions

with the manufacturer and civil aviation authorities.

Discussion

From the standpoint of a passenger safety system, the airbag is unique in that it is both an active and entirely autonomous device. While the automotive industry has good experience with airbags, the conditions of use and reliance on the airbag as the sole means of injury protection are quite different. In automobile installations, the airbag is a supplemental system and works in conjunction with an upper torso restraint. In addition, the crash event is more definable and of typically shorter duration, which can simplify the activation logic. The airplane-operating environment is also quite different from automobiles and includes the potential for greater wear and tear, and unanticipated abuse conditions (due to galley loading, passenger baggage, etc.); airplanes also operate where exposure to high intensity electromagnetic fields could affect the activation system.

The following proposed special conditions can be characterized as addressing either the safety performance of the system, or the system's integrity against inadvertent activation. Because a crash requiring use of the airbags is a relatively rare event, and because the consequences of an inadvertent activation are potentially quite severe, these latter requirements are probably the more rigorous from a design standpoint.

Applicability

As discussed above, these special conditions are applicable to the Model 777 series airplanes. Should BF Goodrich apply at a later date for a supplemental type certificate to modify any other model included on Type Certificate No. T00001SE to incorporate the same novel or unusual design feature, the special conditions would apply to that model as well under the provisions of § 21.101(a)(1).

Conclusion

This action affects only certain novel or unusual design features on the Boeing Model 777 series airplanes. It is not a rule of general applicability, and it affects only the applicant who applied to the FAA for approval of these features on the airplane.

List of Subjects in 14 CFR Part 25

Air transportation, Aircraft, Aviation safety, Safety, Reporting and recordkeeping requirements.

The authority citation for these proposed 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 the following special conditions as part of the type certification basis for the Boeing Model 777 series airplanes equipped with BF Goodrich inflatable lapbelts.

1. *Seats With Inflatable Lapbelts.* It must be shown that the inflatable lapbelt will deploy and provide protection under crash conditions where it is necessary to prevent serious head injury. The means of protection must take into consideration a range of stature from a two-year-old child to a ninety-fifth percentile male. The inflatable lapbelt must provide a consistent approach to energy absorption throughout that range. In addition, the following situations must be considered:

- a. The seat occupant is holding an infant.
- b. The seat occupant is a child in a child restraint device.
- c. The seat occupant is a child not using a child restraint device.
- d. The seat occupant is a pregnant woman.

2. The inflatable lapbelt must provide adequate protection for each occupant regardless of the number of occupants of the seat assembly, considering that unoccupied seats may have active seatbelts.

3. The design must prevent the inflatable lapbelt from being either incorrectly buckled or incorrectly installed such that the airbag would not properly deploy. Alternatively, it must be shown that such deployment is not hazardous to the occupant, and will provide the required head injury protection.

4. It must be shown that the inflatable lapbelt system is not susceptible to inadvertent deployment as a result of wear and tear, or inertial loads resulting from in-flight or ground maneuvers (including gusts and hard landings), likely to be experienced in service.

5. Deployment of the inflatable lapbelt must not introduce injury mechanisms to the seated occupant, or result in injuries that could impede rapid egress. This assessment should include an occupant who is in the brace position when it deploys and an occupant whose belt is loosely fastened.

6. It must be shown that an inadvertent deployment, that could cause injury to a standing or sitting person, is improbable.

7. It must be shown that inadvertent deployment of the inflatable lapbelt,

during the most critical part of the flight, will either not cause a hazard to the airplane or is extremely improbable.

8. It must be shown that the inflatable lapbelt will not impede rapid egress of occupants 10 seconds after its deployment.

9. The system must be protected from lightning and HIRF. The threats specified in Special Condition No. 25-ANM-78 are incorporated by reference for the purpose of measuring lightning and HIRF protection. For the purposes of complying with HIRF requirements, the inflatable lapbelt system is considered a "critical system" if its deployment could have a hazardous effect on the airplane; otherwise it is considered an "essential" system.

10. The inflatable lapbelt must function properly after loss of normal aircraft electrical power, and after a transverse separation of the fuselage at the most critical location. A separation at the location of the lapbelt does not have to be considered.

11. It must be shown that the inflatable lapbelt will not release hazardous quantities of gas or particulate matter into the cabin.

12. The inflatable lapbelt installation must be protected from the effects of fire such that no hazard to occupants will result.

13. There must be a means for a crewmember to verify the integrity of the inflatable lapbelt activation system prior to each flight or it must be demonstrated to reliably operate between inspection intervals.

Issued in Renton, Washington, on December 1, 1999.

Vi L. Lipski,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM-100.

[FR Doc. 99-32110 Filed 12-10-99; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99-NE-57-AD]

RIN 2120-AA64

Airworthiness Directives; CFM International CFM56-2, -2A, 2B, -3, -3B, and -3C Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness

directive (AD) that is applicable to CFM International CFM56-2, -2A, -2B, -3, -3B, and -3C series turbofan engines.

This proposal would require a one-time eddy current inspection (ECI) for cracks in the bolt holes of high pressure turbine (HPT) front rotating air seals.

This proposal is prompted by reports of machining anomalies in a bolt hole that led to an HPT front rotating air seal failure. The actions specified by the proposed AD are intended to detect cracks in the bolt holes of HPT front rotating air seals, which can lead to an uncontained engine failure and damage to the aircraft.

DATES: Comments must be received by January 12, 2000.

ADDRESSES: Submit comments to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-NE-57-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may also be sent via the Internet using the following address: "9-ane-adcomment@faa.gov". Comments sent via the Internet must contain the docket number in the subject line. Comments may be inspected at this location between 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from CFM International, Technical Publications Department, 1 Neumann Way, Cincinnati, OH 45215; telephone (513) 552-2800, fax (513) 552-2816. This information may be examined at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: James Rosa, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7152, fax (781) 238-7199.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 99NE-57-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-NE-57-AD, 12 New England Executive Park, Burlington, MA 01803-5299.

Discussion

The Federal Aviation Administration (FAA) has received a report of an uncontained engine failure on a CFM International Model CFM56-3 turbofan engine. An investigation revealed a crack in a bolt hole of the high pressure turbine (HPT) front rotating air seal due to machining anomalies. The manufacturer has identified other HPT front rotating air seals by serial number (S/N) that may have the same anomalies. This condition, if not corrected, could result in cracks in the bolt holes of HPT front rotating air seals, which can lead to an uncontained engine failure and damage to the aircraft.

Service Information

The FAA has reviewed and approved the technical contents of the following CFM International Service Bulletins (SBs): CFM56-2 SB 72-869, dated November 12, 1999; CFM56-2A SB 72-470, dated November 12, 1999; CFM56-2B SB 72-611, dated November 12, 1999, and CFM56-3/3B/3C SB 72-922, dated November 12, 1999. These SBs describe the procedures for eddy current inspections (ECI) for cracks in the bolt holes of HPT front rotating air seals caused by machining anomalies. Additionally, these SBs identify by S/N the HPT front rotating air seals that may have the same anomalies.