listed under the heading **FOR FURTHER INFORMATION CONTACT**.

If you are in need of assistance or require a reasonable accommodation for the meeting or meeting documents, please contact the person listed under the heading **FOR FURTHER INFORMATION CONTACT**. Sign and oral interpretation, as well as a listening device, can be made available if requested 10 calendar days before the meeting.

Issued in Washington, DC on June 8, 2000.

Florence L. Hamn,

Acting Director, Office of Rulemaking.

[FR Doc. 00–14912 Filed 6–13–00; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Aviation Rulemaking Advisory Committee Meeting on Transport Airplane and Engine Issues

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of public meeting.

SUMMARY: This notice announces a public meeting of the FAA's Aviation Rulemaking Advisory Committee (ARAC) to discuss transport airplane and engine (TAE) issues.

DATES: The meeting is scheduled for June 27–28, 2000, beginning at 8:30 a.m. on June 27. Arrange for oral presentations by June 22.

ADDRESSES: Boeing Commercial Airplane Group, 535 Garden Avenue, N., Building 10–16, Renton, WA.

FOR FURTHER INFORMATION CONTACT: Effie M. Upshaw, Office of Rulemaking, ARM–209, FAA, 800 Independence Avenue, SW., Washington, DC 20591, Telephone (202) 267–7626, FAX (202) 267–5075, or e-mail at effie.upshaw@faa.gov.

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463; 5 U.S.C. app. III), notice is given of an ARAC meeting to be held June 27–28, in Renton, WA.

The agenda will include:

June 27

- Opening Remarks
- FAA Report
- Joint Aviation Authorities Report
- Transport Canada Report
- Executive Committee Meeting Report
- Harmonization Management Team Report
- Engine Harmonization Working Group (HWG) Report
- Avionics Systems HWG Report and Vote
- Flight Guidance System HWG Report and Vote
- Systems Design and Analysis HWG Report
- Ice Protection HWG Report
- Powerplant Installation HWG Report and Vote
- Seat Test HWG Report
- Design for Security HWG Report and Vote

June 28

- Braking System HWG Report and vote
- General Structures HWG Report and Vote
- Airworthiness Assurance HWG Report
- Flight Test HWG Report and Vote
- Electromagnetic Effects HWG Report
- Loads & Dynamics HWG Report and Vote
- Flight Controls HWG Report and Vote
- Mechanical Systems HWG Report and Vote
- Electrical Systems HWG Report and Vote

Nine HWGs-Avionics Systems, Flight Guidance System, Powerplant Installation, General Structures, Flight Test, Loads & Dynamics, Flight Controls, Mechanical Systems, and Electrical Systems—plan to request approval of technical reports drafted under the Fast Track process. The Design for Security HWG plans to seek approval of its phase 1 report.

The Braking Systems HWG plans to request a vote to submit a proposed disposition of comments to the FAA. The disposition of comments relate to a proposed rule on brakes and braking systems certification tests and analysis that was published in the **Federal Register** on August 10, 1999; the comment period closed November 8, 1999 (64 FR 43570).

Attendance is open to the public, but will be limited to the space available. Visitor badges are required to gain entrance to the building in which the meeting is being held. Please confirm your attendance with Norm Turner, (425) 234–3312, or by e-mail, *norman.g.turner@Boeing.com.* Please provide the following information: full legal name, country of citizenship, and name of your company, if applicable.

The public must make arrangements by June 22 to present oral statements at the meeting. Written statements may be presented to the committee at any time by providing 25 copies to the Assistant Executive Director for Transport Airplane and Engine issues or by providing copies at the meeting. Copies of the documents to be voted upon may be made available by contacting the person listed under the heading **FOR FURTHER INFORMATION CONTACT**.

If you are in need of assistance or require a reasonable accommodation for the meeting or meeting documents, please contact the person listed under the heading **FOR FURTHER INFORMATION CONTACT**. Sign and oral interpretational, as well as a listening device, can be made available if requested 10 calendar days before the meeting.

Issued in Washington, DC on June 8, 2000.

Florence L. Hamn,

Acting Director, Office of Rulemaking.

[FR Doc. 00–14913 Filed 6–13–00; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Policy Statement Number ACE–00–23.561.01]

Proposed Issuance of Policy Memorandum, Methods of Approval of Retrofit Shoulder Harness Installations in Small Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of policy statement, request for comments.

SUMMARY: This document announces an FAA proposed general statement of policy applicable to the modification of small airplanes. This document advises the public, in particular, small airplane owners and modifiers, of additional information related to acceptable methods of approval of retrofit shoulder harness installations. This notice is necessary to advise the public of FAA policy and give all interested persons an opportunity to present their views on the policy statement.

DATES: Comments submitted must be received no later than July 14, 2000.

ADDRESSES: Send all comments on this policy statement to the individual identified under **FOR FURTHER INFORMATION CONTACT** at Federal Aviation Administration Small Airplane Directorate, ACE–111, Room 301, 901 Locust, Kansas City, Missouri 64106.

FOR FURTHER INFORMATION CONTACT: Michael Reyer, Federal Aviation Administration, Small Airplane Directorate, ACE–111, Room 301, 901 Locust, Kansas City, Missouri 64106, telephone (816) 329–4131; fax 816–329–4090; e-mail; michael.reyer@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to comment on this proposed policy statement, ACE–00–23–561–01, by submitting such written data, views, or arguments as they desire. Comments should be marked, ''Comments to policy statement ACE–00–23.561–01,'' and be submitted in duplicate to the above address. The Manager, Small Airplane Directorate, will consider all communications received on or before the closing date for comments.

Background

This notice announces the availability of the following proposed policy memorandum, ACE–00–23.561–01, for review and comment. The purpose of this memorandum is to address methods of approval for retrofit shoulder harness installations in small airplanes.

Effect of General Statement of Policy

The FAA is presenting this information as a set of guidelines appropriate for use. However, this document is not intended to establish a binding norm, it does not constitute a new regulation and the FAA would not apply or rely upon it as a regulation. The FAA aircraft Certification Offices (ACO's) and Flight Standards District Offices (FSDO's) that certify changes in type design and approve modifications in normal, utility, and acrobatic category airplanes should generally attempt to follow this policy when appropriate. Applicants should expect that the certificating officials would consider this information when making findings of compliance relevant to retrofit shoulder harness installations.

Also, as with all advisory material, this statement of policy identifies one means, but not the only means, of compliance.

Because this proposed general statement of policy only announces what the FAA seeks to establish as policy, the FAA considers it to be an issue for which public comment is appropriate. Therefore, the FAA requests comment on the following proposed general statement of policy relevant to compliance with 14 CFR Part 23, § 23.561, and other related regulations.

General Statement of Policy

Summary

Retrofit shoulder harness installations may be approved by Supplemental Type Certificate (STC), Field Approval, or minor change. An STC is the most rigorous approval and it offers the highest assurance that all of the airworthiness regulations have been met. Field Approvals are granted for an individual airplane for an alteration that involves little or no engineering. Some shoulder harness installations have been made as a minor change. In this case, the FAA certificated mechanic who installs it makes an entry in the airplane's maintenance log.

We do not encourage retrofit shoulder harness installation by minor change. However, the FAA should not prohibit the airplane owner to have such installations made by minor change, even though they may not provide the 9.0 g forward occupant protection required by regulation [Civil Air Regulation (CAR) 3.386 or 14 CFR Part 23, § 23.561]. While the preferred method of approval of such installations is by STC of Field Approval, shoulder harnesses could be installed by minor change in:

(1) The front seats of those small airplanes manufactured before July 19, 1978, and

(2) In other seats of those small airplanes manufactured before December 13, 1986.

This may be performed as a minor change only if the installation requires no modification of the structure (such as welding or drilling holes). Also, the airplane's certification basis must be CAR 3 or predecessor regulations, or Part 23 prior to Amendment 23–20. Any retrofit shoulder harness installation, even those approved as a minor change, is a safety improvement over occupant restraint by seat belt alone.

Introduction

In January 1997, the Anchorage Aircraft Certification Office (ACO) Manager requested the Small Airplane Directorate to study the issue of retrofit shoulder harness installations in small airplanes. The Anchorage ACO specifically requested guidance for a Supplemental Type Certificate (STC) project to install shoulder harnesses in Piper PA–18 series airplanes. This proposed policy presents the results of our study for public comment. Approval of the harness installation only is addressed. Approval of the harness is made to Technical Standard Order (TSO)–C114, Torso Restraint Systems.

During 1998, our office participated in an Aviation Safety Program to increase the use and effectiveness of occupant restraint systems in general aviation airplanes. This program is in support of the occupant survivability element of the Administrator's Safety Agenda for general aviation, which has a goal of significantly reducing the number of fatal accidents over a ten-year period. Most of the content of this proposed policy was presented in a paper at the August 19, 1998, meeting of this Aviation Safety Program.

The Manager of the Continuing Airworthiness Maintenance Division of Flight Standards, AFS–300, has reviewed this proposed policy and concurs with it.

References

1. Advisory Circular (AC) 21–34, Shoulder Harness—Safety Belt Installations, June 4, 1993.

2. AC 23–4, Static Strength Substantiation of Attachment Points for Occupant Restraint System Installations, June 20, 1986.

3. AC 43.13–2A, Acceptable Methods, Techniques, and Practices—Aircraft Alterations, Revised 1977.

4. Order 8300.10, Airworthiness Inspectors Handbook, Volume 2, Change 10, October 30, 1995.

5. Technical Standard Order (TSO)–C114, Torso Restraint Systems, March 27, 1987.

Discussion

Requirements

1. *Front seat shoulder harnesses required.* 14 CFR Part 23, § 23.785, as amended by Amendment 23–19, effective July 18, 1977, required all normal, utility, and acrobatic category airplanes for which application for types certificate was made on or after July 18, 1977, to have an approved shoulder harness for each front seat. Section 91.205(b)(14) requires all small civil airplanes manufactured after July 18, 1978, to have an approved shoulder harness for each front seat. The shoulder harness must be designed to protect the occupant from serious head injury when the occupant experiences the ultimate inertia forces specified in § 23.561(b)(2). The inertia force requirements are discussed in paragraph 3 below.

2. *Shoulder harnesses required at all seats.* Section 91.205(b)(16) requires all normal, utility, and acrobatic category airplanes with a seating configuration of 9 or less, excluding pilot seats, manufactured after December 12, 1986, to have a shoulder harness, for forward-facing and aft-facing seats, that meets the requirements of § 23.785(*g*) [which requires that the occupant be protected from the ultimate inertia forces specified in § 23.56(b)(12)]. Section 23.78(g) also provides: ''For other seat orientations, the seat and restraint means must be designed to provide a level of occupant protection equivalent to that provided for forward and aft-facing seats with safety belts and shoulder harnesses installed.'' The above Part 91 operating rule stems from § 23.2, Special retroactive requirements,

Amendment 23–32, effective December 12, 1985.

3. Civil Air Regulation (CAR) 3.386 and Part 23, § 23.561, Amendments 23–0 through 23–34, effective February 17, 1987, require occupant protection from serious injury during a minor crash landing when ''proper use is made of belts or harnesses provided for in the design,'' when the occupants are subjected to the following ultimate inertia forces:

	Normal and utility category	Acrobatic category
Forward	9.0 g	9.0 g
Sideward	1.5 g	1.5 g
Upward	3.0 g	4.5 g

At Amendment 23–36, effective September 14, 1988, the above words in quotes were changed in § 23.561 to read: ''proper use is made of seats, safety belts, and shoulder harnesses provided for in the design.'' The ultimate inertia forces remain the same through the current amendment.

For inertia force requirements for occupant protection preceding CAR 3, refer to Table 1 in AC 21–34, which lists the requirements for the regulations dating from Bulletin 7–A to the original Part 23.

Methods of Approval of Retrofit Shoulder Harness Installations

1. *Supplemental Type Certificate (STC):* An STC is the most desirable and most rigorous approval, and it offers the highest assurance that all of the airworthiness regulations have been met. The STC approvals are issued by the FAA Aircraft Certification Offices (ACO's). Supplemental Type Certificate approvals are usually obtained by a shoulder harness installation kit supplier for multiple airplane installations in a particular airplane model or model series.

Advisory Circular 21–34 and 23–4 (References 1 and 2) provide guidance and acceptable means of compliance for shoulder harness and seat belt installations. Advisory Circular 23–4 specifically addresses Part 23 installations. These AC's would also be applicable to installations in airplanes having a certification basis of predecessor regulations (CAR 3, etc).

The applicant for an STC will often use a salvaged airplane fuselage to perform the pull test to apply the prescribed ultimate inertia loads because the 9.0 g forward load, in particular, may cause structural failure or permanent set. It may be a problem that the available test airframe may be stronger than the lowest strength production airframe. This may particularly be a problem in steel tube airframes. During the production of such airframes over the course of many years, even decades, various specification materials may be used. For example, many CAR 3 (and predecessor regulations) airplanes were originally produced from 1025 steel tubing and later constructed from higher strength 4130 steel. In the case studied, two different specification 1025 steel tubings were used that may have an ultimate tensile strength (UTS) ranging from 55,000 to 79,000 psi. The UTS of 4130 steel is 90,000 to 95,000 psi.

The test article should be representative of the lowest strength production airframe. This may be accomplished by a conformity inspection using the production drawings. The strength of materials of parts affected by the modification needs to be verified by the airframe manufacturer's process and production records. The serial number of the test article needs to be verified. An alternative course of action would be to determine, by appropriate tests (*e.g.*, chemical analysis, hardness tests, strength tests), the strength of the parts of the test article affected by the modification, and test to a conservatively higher load that accounts for the difference in strengths of the test article and the lowest strength production article. Determination of the higher applied test load should take into account any uncertainty in the test(s) used to determine the strength of the material.

Advisory Circular 23–4 provides an acceptable means of compliance for static strength substantiation of attachment points for occupant restraint system installations. A test block is described to apply the 9.0 g forward inertia load. The safety belt installation alone is tested to 100 percent of the load. The shoulder and safety belt combined load is distributed 40 percent to the shoulder harness and 60 percent to the seat belt.

In airplanes having side-by-side seats, the pull test may need to be applied simultaneously to the harness fittings for both seats, depending on the type of harness and where the upper ends are anchored. Normally, this would not be necessary for a single diagonal belt shoulder harness attached to the outboard fuselage side or wing spar root end.

In the case of a pull test for a retrofit shoulder harness installation in the tandem-seat tubular steel PA–18 fuselage, the forward inertia load was applied simultaneously for both harnesses. This was done for convenience in applying and reacting the loads. It was found that due to the tube geometry, the load at the aft harness attachment caused a tension in the rear spar carrythrough tube, to which the front seat shoulder harness upper end was attached. This enabled the front seat harness attachment to test to a higher load than if the pull test was applied to each harness individually. In such a case, the test loads for each harness should be performed individually.

Part 21, § 21.50(b), requires the holder of an STC to furnish Instructions for Continued Airworthiness, prepared in accordance with § 23.1529.

An STC cannot be used to modify an aircraft without the permission of the STC holder. Federal Aviation Administration Notice 8110.69 dated June 30, 1997, requires the STC holder to provide the customer (installer or airplane owner) with a signed permission statement that includes the following:

(a) Product (aircraft, engine, propeller, or appliance) to be altered, inducing serial number of the product;

(b) The STC number; and

(c) The person(s) who is being given consent to use the STC.

The permission statement needs to be maintained as part of the aircraft records. The requirement for this permission statement originated in the Federal Aviation Authorization Act of 1996 (Public Law 104–264). This provision was put into law to try to stop the ''pirating'' of STC's.

2. *Field Approval.* Shoulder harnesses may be installed by a Field Approval (FAA Form 337), given by a Flight Standards Aviation Safety Inspector. Field Approvals are granted for an individual airplane for an alteration that involves little or no engineering. If the installation requires structural modification, an engineering approval will need to be completed by an ACO. An installation by Field Approval would normally be performed when an STC is not available. A Field Approval constitutes a change to type design and must meet the same regulatory requirements as a STC.

Advisory Circular 43.13–2A (Reference 3) contains methods, techniques, and practices acceptable to the Administrator for use in altering civil aircraft. Chapter 9 covers shoulder harness installations. Section 3 covers attachment methods. Shoulder harnesses installed by Field Approval must meet the same regulatory requirements as an STC. Therefore, the applicant should demonstrate by test 9.0 g forward load capability. The test load should be 814 pounds for Normal

Category or 910 pounds for Utility or Acrobatic Category, in accordance with AC 23–4.

Reference 4, Chapter 1, Perform Field Approval of Major Repairs and Major Alterations, Section 1, paragraph 5. D(2) states: ''Acceptable data that may be used on an individual basis to obtain approval are:

• AC's 43.13–1A and 43.13–2A, as amended: *

• Manufacturer's technical information (*e.g.,* manuals, bulletins, kits, etc.)

• FAA Field Approvals''

Note: Advisory Circular (AC) 43.13–1A has been superseded by AC 43.13–1B, dated September 8, 1998.

When using a previous Field Approval as acceptable data, the pull test need not be performed if it can be determined that a previous pull test applied 814 pounds for Normal Category or 910 pounds for Utility or Acrobatic Category. Field Approvals for shoulder harness installations should not be done by referring a previous Field Approval and deleting the pull test, unless the attachment parts have a Parts Manufacturer Approval (PMA), or other FAA approval. If the attachment parts have no FAA approval, the strength is not known or assured, since they have not been manufactured to an FAA approved quality control system.

Shoulder harness installations attaching to the center of an unsupported wing carrythrough tube, or other unsupported member, should not be given a Field Approval without a design approval by an Aircraft Certification Office. Applying the test load in such cases may cause damage or permanent set to the affected structure. Figure 9–16 in AC 43.13–2A shows typical shoulder harness attachments to tubular members. These are all at tube intersections and not at the center of unsupported tubes. Figure 9–12 shows a typical wing carrythrough member installation. This appears to be in the center of the carrythrough member, which is a hat section as found in mental skinned airplanes. Part of this figure shows that the hat section is reverted to sheet metal skin (which would provide longitudinal support).

Personnel performing the Field Approval must ensure that both the harness and belt are compatable and have a TSO approval.

Flight Standards Information Bulletin for Airworthiness (FSAW) 98–03, dated January 30, 1998, (in Order 8300.1) requires that a Field Approval include Instructions for Continued Airworthiness prepared (in the case of Part 23 airplanes) in accordance with § 23.1529. The instructions will be documented on FAA Form 337 and become a part of either the aircraft's inspection or maintenance program, or both.

3. *Minor change.* 14 CFR Part 21, § 21.93(a), Classification of changes in type design states. ''A minor change is one that has no appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product.''

Information provided to us by the Anchorage ACO indicates that some shoulder harness installations that provide known safety improvements have been made as a minor change. In these situations, the FAA certificated mechanic who installs it makes an entry in the airplane's maintenance log.

One shoulder harness installation kit supplier uses this process (no FAA approvals) to install shoulder harnesses in PA–18 airplanes. The installation does not require modification of the airframe. The front seat harness attaches to the center of the rear wing spar carrythrough tube. However, it may not meet the 9.0 g forward inertia load required by CAR 3.386. The kit supplier stated that some airplane owners that had accidents reported that the harness installation had saved their lives. Again, shoulder harness installations should not attach to the center of an unsupported wing carrythrough tube or other unsupported member, since this type of attachment may pose a risk to the structural integrity of the airplane.

Some shoulder harnesses that have been installed by minor change do not have a TSO approval. Technical Standard Order C114, Torso Restraint Systems, was issued March 27, 1987, Torso restraint systems manufactured before that date did not have to meet the prescribed Society of Automotive Engineers standard, Aerospace Standard 8043, Aircraft Torso Restraint System, dated March 1986.

We have studied the circumstances and legality of shoulder harnesses installations approved by minor change. An airplane owner may wish to install shoulder harnesses, but an STC or prior Field Approval is not available for his airplane. In this case, it is not likely that an individual airplane owner would apply for an STC or a Field Approval because of the costs involved in hiring an engineering consultant to perform the structural test and any associated structural analysis. Also, there is a possibility that the airframe may be damaged during the pull test. In such installations, a pull test would not be performed and there is no assurance that the installation will provide occupant protection to the ultimate inertia force requirements (particularly the 9.0 g forward force) of § 23.561 or CAR 3.386.

Concerning the legality of shoulder harness installation by minor change, we conclude the following: Since CAR 3.386 and § 23.561(b)(1) prior to Amendment 23–26 (which became effective September 14, 1988) state that ''proper use is made of belts or harnesses provided in the design,'' the previously approved seat belt installation alone must meet the prescribed ultimate inertia forces.

Civil Air Regulation 3.652, Functional and installational requirements, states: ''Each item of equipment which is essential to the safe operation of the airplane shall be found by the Administrator to perform adequately the functions for which it is to be used, shall function properly when installed and shall be adequately labeled as to its identification, function, operational limitations, or any combination of these, whichever is applicable.'' Prior to Amendment 23–20 (which became effective September 1, 1977), § 23.1301 contained essentially the same requirement as CAR 3.652. Amendment 23–20 deleted the words ''essential to safe operation'' and made the provisions of § 23.1301 applicable to ''each item of installed equipment.'' Regarding these rules, we conclude that if a shoulder harness is not required equipment, it is not essential to the safe operation of the airplane. Therefore, CAR 3.652 and § 23.1301, prior to Amendment 23–20, should not be used as a basis to prohibit shoulder harness installation by minor change. These rules should be applied to shoulder harness installations made by STC, Field Approval, and minor change, but there is no way of enforcing this in the case of installation by minor change.

The mechanic making such installations should consult AC 43.13–2A, Chapter 9, for information on restraint systems, effective restraint angles, attachment methods, and other details of installation. Only harnesses with TSO–C114 approval should be installed.

Issued in Kansas City, Missouri, on May 31, 2000.

Michael Gallagher,

Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 00–14910 Filed 6–13–00; 8:45 am]

BILLING CODE 4910–13–M