



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

April 16, 1984

RESOURCES, COMMUNITY,
AND ECONOMIC DEVELOPMENT
DIVISION

B-214803



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The Honorable Andy Ireland, Chairman
Subcommittee on Export Opportunities and
Special Small Business Problems
Committee on Small Business
House of Representatives

Dear Mr. Chairman:

Subject: Information on the Federal Aviation
Administration's Regulation of the Aircraft
Parts Manufacturing Industry

In your June 10, 1983, letter, you and Congressman Skelton expressed concern with Federal Aviation Administration (FAA) practices and procedures for regulating aircraft and engine parts manufacturers. You requested that we review FAA's regulatory practices and procedures to ascertain their impact upon economic efficiency and competition and to determine if those practices and procedures favor original equipment manufacturers over other parts manufacturers.

We agreed with your office to examine FAA's overall regulations, policies, and practices relating to FAA's Parts Manufacturing Approval (PMA) process. In February 1984, we briefed your office on the status of our preliminary work, which was based on contacts with five parts manufacturers, five original equipment manufacturers, four aircraft repair facilities, and three FAA regional offices. We pointed out that FAA has been trying to change the PMA process since at least 1977 in an attempt to eliminate unnecessary procedural burdens, improve safety, and standardize the PMA process between FAA regions. Parts manufacturers have resisted FAA's attempted changes because they believe FAA's proposed actions would restrict small business opportunities.

We advised your office that the five parts manufacturers and four of the five original equipment manufacturers we contacted said that FAA's PMA process, which for the most part has been in existence since 1956, has functioned satisfactorily. One original equipment manufacturer, however, objected to FAA's comparing its designs, which it considers proprietary data, with designs submitted by parts manufacturers. We also pointed out that officials of FAA and aircraft repair facilities, which use parts manufactured under the PMA process, said that the parts present no safety problems. FAA has proposed a rule to allow parts manufacturers to

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certify, without FAA verification, that aircraft parts they intend to manufacture will be identical to original equipment manufacturers' parts. This rule was opposed by all of the original equipment manufacturers, parts manufacturers, and repair facilities who offered us comments, primarily because they believed the rule would reduce air safety.

You agreed that this information satisfied the Subcommittees' request but asked that we summarize our briefing in a letter. This letter summarizes the work we performed and the results of the briefing.

OBJECTIVES, SCOPE, AND METHODOLOGY

In order to understand the PMA process and its effect on aircraft and engine parts manufacturers, we reviewed FAA regulations, policies, procedures, proposed regulatory changes, and congressional hearings into the PMA process. Our work was performed at FAA headquarters and the FAA southwest regional office in Ft. Worth, Texas. We also visited the southern regional office in Atlanta, Georgia, and the eastern regional office in New York, New York, to get a broader perspective of how FAA regional offices process PMA applications. We discussed the PMA process with and obtained documentation on how the PMA process works from 17 FAA certification officials.

We also discussed the PMA process with five parts manufacturers, five original equipment manufacturers, and representatives of four aircraft repair facilities that use parts manufactured under PMAs. The FAA regional offices and the firms we visited were selected to obtain an understanding of the PMA process and potential problems that may exist and do not represent a statistical sample of the universe. Our work was performed during the period November 1983 through January 1984 and was made in accordance with generally accepted government auditing standards.

BACKGROUND

FAA is responsible for prescribing standards, rules, and regulations to promote flight safety of civil aircraft. For each new type of aircraft, FAA approves the design and component fabrication of the original equipment manufacturer. The original equipment manufacturers, in order to gain FAA approval, must comply with extensive design, flight testing, and production quality control requirements.

When a parts manufacturer other than the original equipment manufacturer wishes to produce a replacement or modification part

for an existing aircraft, it must also get FAA approval. FAA issues a Parts Manufacturers Approval Notification after it has determined that the applicant's part and production process meets the same airworthiness requirements as those of the original equipment manufacturer.

FAA regulations provide the following three methods that parts manufacturers can use to obtain a PMA:

- Submit engineering test reports and computations necessary to show that the design of the part meets applicable airworthiness requirements.
- Demonstrate that design of the part is identical to the design of a part previously approved for manufacture.
- Demonstrate that the part design is the original equipment manufacturer's design obtained through a licensing agreement.

According to parts manufacturers, only the second method is economically feasible. Parts manufacturers using this method submit their drawings of a part's design to FAA, and FAA compares these drawings with the original equipment manufacturers' design drawings to determine if they are identical. Parts manufacturers said that the first method is not economically feasible because of the extensive testing required to establish a part's airworthiness. As for the third method, parts manufacturers said that original equipment manufacturers do not usually enter into licensing agreements with competing parts manufacturers.

FAA's ATTEMPTS TO CHANGE THE PMA PROCESS

Since 1977 FAA has proposed changes to the PMA regulatory process aimed at clarifying how PMA applicants should show that their designs are identical to the original equipment manufacturer's design. FAA, to date, has not adopted any of the changes because of strong opposition from the parts manufacturers, who said that the proposed changes would make it more difficult for a small business to obtain a PMA authorization.

FAA's most recent proposal to change the PMA rules is Notice of Proposed Rulemaking 77-19C, which was issued on January 15, 1981. According to FAA, the proposed rulemaking would eliminate unnecessary procedural burdens, improve safety, and standardize the PMA process between FAA regions. Specifically, the rulemaking provided that FAA would no longer compare the design of a part

submitted by a PMA applicant with the original manufacturer's design but would accept a "certification" by the PMA applicant that the design of the part is identical to an existing approved design. Coupled with this was a proposal to impose stringent penalties for false certifications. Under these provisions, parts manufacturers could not only lose their PMA authorization for the particular part, but could also have other FAA certificates suspended or revoked. The proposed rule had not been finalized or withdrawn as of March 1, 1984.

Following a national FAA Aircraft Certification Officers' meeting in August 1983, the FAA regional offices we visited made changes to the PMA process that hindered the ability of independent parts manufacturers to obtain PMA approval. In these offices, parts manufacturers seeking PMAs were sometimes required to submit the original equipment manufacturer's design data along with their own design data or have the application rejected. FAA officials said that the changes were made because FAA was uncertain whether it could request the original equipment manufacturer's proprietary design data for the purpose of design comparison.

Parts manufacturers we contacted said that it was virtually impossible for them to obtain the original equipment manufacturer's design data because it is closely guarded proprietary information. FAA officials in two of the regions compared the parts manufacturer's design data with the original equipment manufacturer's design only when the original equipment manufacturer's design data was on file at the FAA field office. If the original equipment manufacturer's data was not on file, FAA officials refused to request the data from the original equipment manufacturers because of anticipated proprietary data problems, and they told the parts manufacturers seeking PMAs that FAA was not able to grant PMA approval. FAA regional offices frequently do not maintain original equipment manufacturers' design data in their files.

In January 1984 FAA's Director, Office of Airworthiness, in Washington, D.C., issued a directive to the FAA regional offices to discontinue the practices discussed at the August 1983 meeting. The directive stated:

"Effective immediately and pending final disposition of NPRM 77-19C [the proposed rulemaking] data comparisons are to be continued as in the past prior to the August meeting. PMA applicants which have been denied PMA because TC [type certificate--or the original equipment manufacturer's design] data needed was no longer in an FAA office should be contacted and

advised to resubmit their applications. FAA access to TC data held by the manufacturers is provided pursuant to FA 21.49."

PARTICIPANTS SATISFIED WITH
THE CURRENT PMA PROCESS

The five parts manufacturers and four aircraft repair facilities we contacted, as well as four of the five original equipment manufacturers contacted, said that FAA's current PMA process functions satisfactorily. One original equipment manufacturer, however, objected to FAA comparing the design data submitted by a parts manufacturer with its designs, which it considers proprietary data.

FAA and the aircraft repair facilities that use PMA parts said that there were no safety problems with PMA parts. Aircraft repair facilities cite savings to the general aviation users of up to 50 percent when a PMA part is used instead of an original equipment manufacturer's part.

All of the original equipment manufacturers, parts manufacturers, and repair facilities we contacted, except one original equipment manufacturer and one repair facility who did not comment, said that they were opposed to FAA changing the PMA process to accept a certification by the PMA applicant that the design of the part is identical to an existing approved design. Opposition centered on the issues of safety and the proposed penalties that could be imposed by FAA for falsely certifying that designs are identical.

Regarding safety, these individuals said that FAA's acceptance of certifications of identical designs by parts manufacturers seeking PMAs would permit the influx of nonairworthy replacement parts into the supply system, both from ethical manufacturers who make human errors and from unprincipled manufacturers who know their parts are not airworthy.

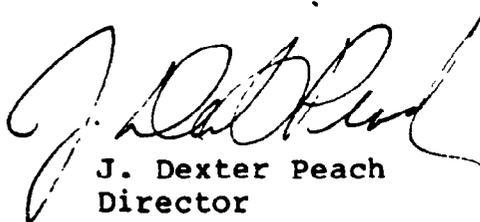
Regarding penalties that FAA could impose on parts manufacturers for falsely certifying that their parts are identical to original equipment manufacturer's parts, parts manufacturers said that they could not only lose their PMA authorization for the particular part, but also have other FAA certificates suspended or revoked as well.

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We are also sending this letter today to Congressman Skelton. We are sending copies of this letter to the Secretary of Transportation and the Acting Administrator of FAA. We will also make copies available to others upon request.

Sincerely yours,



J. Dexter Peach
Director