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REPORT TO THE CONGRESS

Improved Surveillance Needed Over Production Of Critical Parts For Civil Aircraft B 164497(1)

Federal Aviation Administration Department of Transportation

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

H3150 1 FEB 25,1971



COMPTROLLER GENERAL OF THE UNITED STATES WASHINGTON D C 20548

B-164497(1)

To the President of the Senate and the Speaker of the House of Representatives

This is our report on the need for the Federal Aviation Administration, Department of Transportation, to improve surveillance over production of critical parts for civil aircraft The review was made pursuant to the Budget and Accounting Act, 1921 (31 US C 53), and the Accounting and Auditing Act of 1950 (31 US C 67)

Copies of this report are being sent to the Director, Office of Management and Budget, the Secretary of Transportation, and the Administrator, Federal Aviation Administration

Umer A. Atacto

Comptroller General of the United States

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ABBREVIATIONS					

- FAA Federal Aviation Administration
- General Accounting Office production certificate GAO

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COMPTROLLER GENERAL'S REPORT TO THE CONGRESS IMPROVED SURVEILLANCE NEEDED OVER PRODUCTION OF CRITICAL PARTS FOR CIVIL AIRCRAFT Federal Aviation Administration Department of Transportation B-164497(1)

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WHY THE REVIEW WAS MADE

The Federal Aviation Administration (FAA) is required to prescribe standards, rules, and regulations to promote flight safety of civil aircraft. Toward this end FAA promulgates standards governing aircraft design, materials, workmanship, construction, and performance. It also provides surveillance over manufacturers which it certificates as capable of producing aircraft, parts, and equipment. These manufacturers are commonly referred to as production certificate holders

The General Accounting Office (GAO) reviewed this surveillance program because of the program's significance in assuring flight safety of civil aircraft

FINDINGS AND CONCLUSIONS

Certain parts critical to the flight safety of civil aircraft, which are furnished by suppliers to aircraft manufacturers, airline companies, and other aircraft owners, generally are not subjected to production surveillance by FAA or by the production certificate holders The parts not presently under surveillance are known as proprietary parts because neither FAA nor the certificate holders have design control over them, and inspection ordinarily is restricted to verification, at receiving points, that they function properly (See p. 8.)

FAA officials in Washington had been aware of this lack of surveillance but had not determined the scope or magnitude of the problem. They indicated that some critical aircraft parts classified as proprietary parts, previously not subject to production surveillance, were under production surveillance at the time of GAO's review.

In these instances the parts had been placed under surveillance subsequent to the occurrence of an aircraft accident or incident that had been caused by the malfunction of the part One accident had been fatal to the pilot of the aircraft. (See p. 10)

In October 1967, FAA initiated a comprehensive program to reexamine, on a one-time basis, the overall quality control systems of production

<u>Tear Sheet</u>

FEB 25,1971

certificate holders The reexamination, however, did not include proprietary parts not previously under FAA surveillance. (See p. 7.)

In April 1970, shortly before GAO completed its review, the Aerospace Industries Association of America, Inc, agreed to undertake, at FAA's suggestion, a study to evaluate on a national basis the control over critical proprietary parts An FAA official stated that the association's study would be completed by the spring of 1971. (See p. 10.)

Under the FAA's existing program for production surveillance, a number of standard conformity inspections are made covering numerous manufacturing control areas, such as heat treatment, laboratory testing, and metal surface treatment. The FAA program provides comparable levels of production surveillance over the manufacturing activities of both production certificate holders and their suppliers, except for manufacturing of proprietary parts

Surveillance coverage under this program is limited by the availability and location of FAA inspection staffs and the continued increase in the number of manufacturing facilities subject to surveillance. (See p 11)

One of the FAA regional offices has proposed that the production surveillance be directed or limited on the basis of an evaluation of the adequacy of manufacturers' quality control systems over critical aircraft parts GAO believes that the proposed system could provide the expanded production surveillance capability necessary to cover critical aircraft parts, such as proprietary parts, that do not now receive such coverage by FAA or by the production certificate holders. (See p. 12)

RECOMMENDATIONS OR SUGGESTIONS

The Administrator of FAA should provide for

- --Immediate action to ensure that all critical proprietary aircraft parts are subjected to production surveillance by either FAA or the responsible production certificate holders. (See p. 14)
- --Modification of the existing production surveillance program to provide for greater reliance upon the adequacy of production certificate holders' quality control systems as the basis for directing or limiting FAA surveillance over production operations.

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Department of Transportation advised GAO that it was aware of the problems noted by GAO during its review The Department advised GAO

that, upon completion in July 1971 of its overall review currently in process, specific procedures will be established to ensure that all critical proprietary aircraft parts will be subjected to production surveillance and that FAA plans to place greater reliance on the adequacy of production certificate holders' quality control systems. The actions planned by the Department, if effectively implemented, should improve the surveillance over the production of aircraft and related aircraft parts (See p. 14)

GAO believes, however, that, since the Department is aware that the production of certain parts critical to airworthiness of aircraft is not now under surveillance and since in the past similar parts have contributed to accidents and incidents, prompt action should be taken to bring the production of such parts under surveillance

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report is being issued to advise the Congress of the need for immediate measures by FAA to implement production surveillance over critical proprietary aircraft parts and of the corrective action being taken by FAA

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COMPTROLLER GENERAL'S REPORT TO THE CONGRESS IMPROVED SURVEILLANCE NEEDED OVER PRODUCTION OF CRITICAL PARTS FOR CIVIL AIRCRAFT Federal Aviation Administration Department of Transportation B-164497(1)

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FINDINGS AND CONCLUSIONS

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Certain parts critical to the flight safety of civil aircraft, which are furnished by suppliers to aircraft manufacturers, airline companies, and other aircraft owners, generally are not subjected to production surveillance by FAA or by the production certificate holders. The parts not presently under surveillance are known as proprietary parts because neither FAA nor the certificate holders have design control over them, and inspection ordinarily is restricted to verification, at receiving points, that they function properly. (See p. 8)

FAA officials in Washington had been aware of this lack of surveillance but had not determined the scope or magnitude of the problem. They indicated that some critical aircraft parts classified as proprietary parts, previously not subject to production surveillance, were under production surveillance at the time of GAO's review

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GAO believes, however, that, since the Department is aware that the production of certain parts critical to airworthiness of aircraft is not now under surveillance and since in the past similar parts have contributed to accidents and incidents, prompt action should be taken to bring the production of such parts under surveillance.

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CHAPTER 1

INTRODUCTION

The General Accounting Office has reviewed the Federal Aviation Administration's surveillance program concerning the production of parts for civil aircraft. Our review evaluated the effectiveness of the existing production surveillance program in meeting FAA objectives for air safety. We did not make an overall evaluation of all aircraft certification programs, nor did we make any determinations concerning the airworthiness of aircraft affected by the surveillance program. The scope of our review is discussed on page 17.

The Federal Aviation Act of 1958, as amended (49 U.S.C. 1421), authorizes the FAA Administrator to prescribe minimum standards, rules, and regulations to promote safety of flight of civil aircraft. To accomplish this objective with respect to the airworthiness of aircraft, FAA prescribes minimum standards governing aircraft design, materials, workmanship, construction, and performance and provides surveillance over manufacturers engaged in the production of aircraft and/or related aircraft parts and equipment

Responsibility for the aircraft certification program has been delegated by the Administrator to the eight FAA regional offices, five of which are within the continental United States where almost all jet transports that must be approved as airworthy by FAA are manufactured In the regional offices the responsibility for this program has been assigned, in most cases, to the Flight Standards Division.

Under the aircraft certification programs, FAA issues three categories of certificates; they are (1) type certificates, which are normally issued to manufacturers for new aircraft, aircraft engines, and propellers after FAA determines that the parts included in these items are of proper design and material and that the parts meet FAA specifications for safe operation; (2) production certificates, which are discussed below; and (3) airworthiness certificates, which attest to the fact that an aircraft conforms to the approved type design (type certificate) and is in condition for safe operation.

The production certification program is intended to provide approval of and continued surveillance over manufacturers' facilities for duplicating aircraft parts that have been included in aircraft, aircraft engines, or propellers previously type-certificated by FAA. Under this program FAA issues production certificates to manufacturers that intend to produce in volume a part to be included in type-certificated aircraft, aircraft engines, or propellers after the manufacturers' facilities, methods, personnel, and procedures are found by FAA to be adequate to duplicate such parts. In addition FAA provides continual surveillance over these manufacturers and their suppliers in order to review the quality control maintained by the manufacturers of these parts. The actual surveillance work is performed by FAA manufacturing inspectors generally located in Engineering and Manufacturing District Offices within a region's geographic area of responsibility

In the past FAA relied mainly on two methods of surveillance over production certificate holders and their suppliers--surveillance by FAA triennial Production Certification Boards and by Manufacturing Control Area Surveys

Triennial Boards usually are comprised of several FAA inspection teams, supervisory inspectors, and the Chief of the region's Engineering and Manufacturing Branch who is Chairman of the Board The Boards are convened periodically to determine whether manufacturers that have been issued production certificates have continued to comply with FAA's certification rules and are eligible to retain their production certificates The Boards are responsible for making broad reviews of manufacturers' quality assurance efforts rather than comprehensive in-depth investigations of the manufacturers' production processes

The Control Area Survey system is used to determine whether the production certificate holders and their suppliers are complying with specifications and procedures that have been approved by FAA The system functions as a periodic recheck of the systems and procedures of manufacturers in the interim period between triennial Board meetings--at which time the manufacturers' quality control systems are subject to reapproval.

Under the Control Area Survey system, the facilities of prime manufacturers and their suppliers are divided into manufacturing control areas on a functional basis, such as heat treatment, metal surface treatment, and laboratory testing. FAA inspectors try to visit manufacturers' and suppliers' plants at least annually and try to make, at that time, inspections of as many materials, parts, appliances, and assemblies as possible to assure their conformity with originally approved items

Conformity inspections are made by FAA to ensure that aircraft parts passing through critical manufacturing processes conform to FAA-approved processing standards or specifications for the parts. To accomplish this objective, FAA inspectors apply a series of tests and procedures deemed appropriate for the particular parts.

In fiscal year 1968, FAA initiated, on a one-time basis, the reexamination of production certificate holders' quality control of products considered by the FAA to be critical to the airworthiness of aircraft. FAA designated this reexamination a "critical characteristics audit" and assigned the responsibility for the reexamination to its regional offices The objectives, as stated in an FAA order, were (1) to reexamine, on a one-time basis, all FAAapproved manufacturer quality control systems (practices and procedures) that affected the critical characteristics of parts to determine whether parts with critical defects could go undetected through manufacturers' systems and (2) to prepare a report on the results of the reexamination, including any appropriate recommendations for corrective As of November 30, 1970, FAA Washington headquaraction ters had received most of the region reports and expected to complete a review of the results of the critical characteristics audits by July 1971.

The principal officials of the Department of Transportation responsible for the administration of activities discussed in this report are listed in appendix II

CHAPTER 2

IMPROVED SURVEILLANCE NEEDED OVER

PRODUCTION OF CRITICAL PARTS FOR CIVIL AIRCRAFT

FAA needs to improve the surveillance over the production of parts critical to the airworthiness of civil aircraft, because certain of these parts, referred to as proprietary parts, are not subjected to production surveillance. Although FAA had been aware, at the time of our review, of the lack of surveillance over critical proprietary parts, it had not acted to bring all such parts under surveillance. In some instances proprietary parts had been placed under production surveillance, but only after the malfunctioning of that part caused the occurrence of an accident or incident. In one instance the accident had been fatal to the pilot of an aircraft.

FAA's existing production surveillance system is directed primarily toward selected functional areas rather than toward the overall quality control systems of manufacturers holding FAA production certificates. FAA's system coverage is limited, however, by the availability and location of its inspection staffs and by the continuing increase in the number of manufacturing facilities that must be inspected.

In October 1967, FAA initiated a comprehensive program to reexamine, on a one-time basis, the overall quality control systems of production certificate holders. The program, however, did not provide for consideration of critical proprietary aircraft parts. In May 1970, one FAA region proposed that FAA's production surveillance system be directed or limited on the basis of overall evaluations of the adequacy of manufacturers' quality control systems over critical aircraft products. We believe that such a system could include surveillance over the production of many critical aircraft parts that are not currently being subjected to inspection by FAA or by the production certificate holders. In view of the limited number of FAA personnel available for surveillance activities, we believe that FAA should place greater emphasis on requiring production certificate holders to maintain production surveillance over their suppliers.

EXPANDED PRODUCTION SURVEILLANCE NEEDED FOR CRITICAL AIRCRAFT PARTS

We found that certain parts critical to the airworthiness of civil aircraft generally were not being subjected to production surveillance by FAA or by the production certificate holders. FAA defines a critical aircraft part as one that does not have a backup system and the failure of which could cause a fatal aircraft accident.

The critical parts not being subjected to production surveillance are off-shelf items which are purchased by production certificate holders from suppliers and which may be suitable for use in more than one type of aircraft. These parts are referred to as proprietary parts because neither FAA nor the production certificate holders have design control over them, and the suppliers are generally reluctant to permit surveillance over the production of these parts by FAA or by the production certificate holders. Under such circumstances, production certificate holders are limited to verifying the functional aspects of proprietary parts at the receiving inspection points. Such parts may also be purchased by an aircraft owner directly from the supplier for use on his aircraft, in which case the parts would not be subjected to inspection by the production certificate holder or by the FAA prior to their use on the aircraft.

We visited the facilities of a production certificate holder in FAA's Eastern Region to determine the nature and extent of proprietary parts that were not under production surveillance by either the cognizant FAA Engineering and Manufacturing District Office or by the production certificate holder. Representatives of this production certificate holder provided us with a listing of 30 proprietary parts which they considered, for the most part, to be of a critical nature and which were not under production surveillance by the company or by FAA. Discussions with the cognizant FAA inspector confirmed that many of these parts were critical to the operation of an aircraft.

We obtained additional listings of critical proprietary parts from other district offices in the Eastern Region. We were advised by Eastern Region officials that the majority of these parts were not subjected to either FAA's or the manufacturers' surveillance. Following are examples of these proprietary parts and a description of the effect that their failure or malfunction might have on the operation of certain aircraft.

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Flexible propeller coupling used in the DC-7--Failure or malfunction could result in the loss of use of a propeller and engine power.

Engine fuel valve used in DC-9 turbojet--Failure or malfunction could result in the loss of engine power and create a fire hazard.

Flexible drive coupling for engine transmission assembly used in the FH-1100 helicopter--Failure or malfunction could result in complete loss of power to drive the main rotor assembly.

With respect to these and other proprietary parts not subjected to production surveillance, District Office officials stated, in a memorandum to us, that

"Malfunction and/or failure of the above noted parts, and the resultant propeller and/or engine malfunction, under certain conditions, could be catastrophic. *** It should be further noted that proprietary items can be ordered as replacement parts from the manufacturer of the item without going through the P.C. [production certificate] holders receiving inspection and functional test procedures."

In February 1970, while our field review was in progress, we discussed the need for expanded production surveillance over critical proprietary parts with an official in FAA's Washington headquarters. The official stated that there were probably a number of critical proprietary parts which were not under production surveillance by FAA but that he was unaware of the extent to which this condition existed.

Subsequent to completion of our fieldwork, we discussed our findings with FAA officials in Washington who concurred in the need for expanded production surveillance of critical proprietary parts. The officials stated that there were some critical parts classified as proprietary parts, previously not subject to production surveillance, that were later placed under production surveillance by FAA. They stated that, in some instances, these parts had been placed under production surveillance subsequent to the occurrence of an aircraft accident or incident which had been caused by the malfunction of that part. which with

The officials stated further that, in accordance with FAA's suggestion, the Aerospace Industries Association of America, Inc., had agreed in April 1970 to evaluate on a national basis the control over critical proprietary parts and that the results of the study would provide them with additional insight into the problem. According to an FAA official, the association's study had not been initiated as of October 1970 but would be completed by the spring of 1971.

QUALITY CONTROL SYSTEMS APPROACH WOULD BENEFIT EXPANDED PRODUCTION SURVEILLANCE

FAA's current policy is to subject the manufacturing activities of both the production certificate holders and their suppliers to comparable levels of production surveil-To implement this policy, district offices are relance. guired to maintain surveillance over the parts and processes of all suppliers with the exception of certain parts which are subjected to detailed inspection after receipt at production certificate holders' plants. In effect, FAA considers suppliers to be extensions of the production certificate holders' facilities and exercises the same degree of surveillance over suppliers' facilities. In addition. production certificate holders are required by FAA to maintain adequate quality control systems over their own production operations and the production operations of their suppliers.

Under the production certification program, FAA utilizes the triennial Production Certification Boards and Manufacturing Control Area Surveys to maintain surveillance over production certificate holders and their suppliers. Although FAA's existing system of production surveillance is intended to provide considerable inspection coverage, it is limited by the availability and location of inspection staffs and by the continuing increase in the number of manufacturing facilities subject to inspection. For example, at the district office with the largest staff in the Eastern Region, eight manufacturing inspectors are responsible for surveillance over facilities of eight manufacturers and 114 suppliers. One manufacturer has five separate large facilities in the district office's area of responsibility, numerous major part suppliers and process and service suppliers, and a vast number of small subcontractors throughout the Nation. The five remaining district offices in the Eastern Region have smaller staffs and also have comparatively heavy work loads.

We noted that, as a result of a recent reexamination of the quality control systems of production certificate holders, officials in FAA's Eastern Region concluded that one of the major failures of the existing production surveillance system was that it directed district office manpower toward accomplishing a number of standard conformity inspections, such as those made under Control Area Surveys, rather than toward the adequacy of the production certificate holders' overall quality control system.

The Eastern Region found in its reexamination that FAA inspectors, in certain cases, had overlooked entire segments of a manufacturer's quality control system during past inspections. For example, previous FAA inspections did not disclose that one production certificate holder had not established procedures for qualifying or auditing surveillance over nondestructive testing, such as X-ray, and material process suppliers. In another case the Eastern Region found that the outside laboratories used by a production certificate holder for analyzing and qualifying raw material received from suppliers had never been inspected. Adequacy of performance in each of the above areas materially affects the quality of aircraft products.

These deficiencies in the manufacturers' quality control systems should have been detected by FAA during triennial Board reviews of the production certificate holders' facilities and quality control systems. An Eastern Region official stated, however, that in the 3 or 4 days during which these reviews were conducted the Boards made conformity inspections to test the production certificate holders' implementation of their quality control systems. Due to the pressures of time, the Boards did not make a comprehensive evaluation of the manufacturers' quality control system but assumed that the quality control systems were in general conformance with FAA regulations because the systems were approved by FAA prior to issuing the production certificates.

Eastern Region officials, in a special report dated May 1970 on the existing surveillance system, recommended to Washington headquarters that the quality and coverage of surveillance over critical parts, within available manpower limitations, would be improved by placing increased emphasis on overall evaluations of the production certificate holders' quality control systems as a basis for directing or limiting its production surveillance efforts. The FAA had not acted to implement the Eastern Region's recommendations at December 1970. We are of the view that such evaluations could provide needed surveillance over critical proprietary aircraft parts that are not inspected by FAA or by the production certificate holders.

AGENCY COMMENTS AND OUR EVALUATIONS AND CONCLUSIONS

In a draft of this report submitted to the Secretary of Transportation for comment, we proposed that the FAA Administrator take appropriate action to ensure that all critical proprietary aircraft parts are subjected to production surveillance by either FAA or by the responsible production certificate holders. We proposed also that the Administrator modify the existing production surveillance program to provide for greater reliance upon the adequacy of production certificate holders' quality control systems as the basis for directing or limiting FAA's surveillance over both production certificate holders' and suppliers' production operations.

In commenting on our proposals, by letter dated September 28, 1970 (see app. I), the Acting Assistant Secretary for Administration, Department of Transportation, acknowledged the existence of the problems discussed in our report. He stated that FAA recognized the need to assure that the production certificate holders' quality control systems would extend to all suppliers of parts that would be incorporated into a product and, as a result, initiated the critical characteristics audit program in October 1967. Furthermore, he said that FAA's Eastern Region was selected in 1968 to study the overall program and to submit recommendations for improvements in the production and surveillance system. He further stated that:

"Upon completion of our review of both the CCA [critical characteristics audit] and the Eastern Region proposal, specific procedures will be established to ensure that all critical proprietary aircraft parts will be subject to production surveillance and that greater reliance will be placed on the adequacy of PC holders' quality control systems. We expect to complete our review by July 1971."

The action planned by the Department, if effectively implemented, should improve the surveillance over the production of aircraft and related aircraft parts. Regarding the Eastern Region's study of FAA's production surveillance system, we noted that its report, which mentioned proprietary parts as an area needing attention, was presented to Washington headquarters informally in October 1969 and again formally in May 1970. It was not until July 1970 after receiving our draft proposals, however, that the Director, Flight Standards Service, appointed a task force to accelerate the development of a new surveillance system intended to include proprietary parts.

During December 1970, FAA Washington headquarters was in the process of reviewing the results of the critical characteristics audit which had been received and the Eastern Region's report on the production surveillance system. Generally, the Eastern Region did not include critical proprietary aircraft parts under the critical characteristics audit. Also, a FAA Southwestern Region official, in reporting on the final results of the critical characteristics audits in September 1970, stated that.

"The real shortcoming of the program was the fact that it did not take into account <u>all</u> critical parts. I refer specifically to those parts classified as proprietary items. In our present modern-day aircraft, many of the most critical items are proprietary and from all indications it appears they will continue to be ignored, only to remain as the topic of a now and then conversation that every one agrees something should be done about but never quite gets done."

We believe that, since the Department has been aware for some time that certain parts critical to the airworthiness of aircraft are not under production surveillance and that, in the past, similar parts have contributed to or caused accidents, action should have been taken to bring such parts under FAA or production certificate holder surveillance. We believe that such action should be taken as soon as possible and should not be delayed further while the critical characteristics audits are being reviewed and revisions of existing surveillance procedures are being completed.

RECOMMENDATION TO THE ADMINISTRATOR

Accordingly, we recommend that FAA issue, as soon as possible, instructions requiring that critical proprietary aircraft parts be subject to production surveillance by either FAA personnel or by production certificate holders.

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CHAPTER 3

SCOPE OF REVIEW

Our review included an evaluation of selected aspects of FAA's production certification program and was directed toward determining whether these aspects were meeting FAA objectives for air safety. We conducted our review at FAA headquarters in Washington, D.C.; at the FAA Regional Office in New York, New York; and at selected FAA engineering and manufacturing district offices within that region.

We examined pertinent laws, regulations, policies, procedures, correspondence, inspection reports, and other related documents. We discussed matters pertinent to our review with FAA headquarters and Eastern Regional Office officials. We also held discussions with representatives of the aircraft manufacturers and the parts suppliers located within the geographic area of responsibility of one district office concerning the production surveillance over critical proprietary parts.

APPENDIXES

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OFFICE OF THE SECRETARY OF TRANSPORTATION WASHINGTON, D C 20590

ASSISTANT SECRETARY FOR ADMINISTRATION

September 28, 1970

Mr. Bernard Sacks Assistant Director Civil Division General Accounting Office Washington, D C. 20548

Dear Mr Sacks

This is in reply to your request for comments on the draft report concerning Improved Surveillance Needed Over Production of Critical Parts for Civil Aircraft, Federal Aviation Administration (FAA). In this report you conclude that FAA needs to improve surveillance over the production of parts which are critical to the airworthiness of civil aircraft in that (1) certain of these critical items are not presently subjected to production surveillance and (2) the current surveillance system tends to focus on selected functional areas, rather than on the overall quality control system of manufacturers with FAA production certificates (PC). Accordingly, you recommend that the FAA Administrator (1) ensure that all critical proprietary aircraft parts are subjected to production surveillance by either FAA or the responsible PC holder and (2) place greater reliance upon the adequacy of the PC holders' quality control system as a basis for directing or limiting FAA's surveillance over PC holders' and suppliers' production operations.

Our own awareness of the problems noted by your report led us to take certain steps to improve our surveillance system. The FAA has put considerable effort into revising agency procedures for surveillance over aircraft parts, and in expediting the development of a more complete systems approach which will ensure that all critical proprietary parts will be subject to appropriate production surveillance and that greater reliance will be placed on the adequacy of the manufacturer's quality control system APPENDIX I Page 2

In the past, the FAA's method of assuring the airworthiness of aircraft provided for an evaluation of the adequacy of the PC holder's quality control system used in the production of civil aircraft (including any purchases from the suppliers) and was supplemented by spot checking the effectiveness of the system With the growth and increased complexity of the aircraft production system, the FAA recognized the need to evaluate its own surveillance system in an effort to increase its effectiveness. One of the main problems recognized was the need to assure that the PC holder's quality control system would extend to all suppliers of parts that would be incorporated into the product As a result, the agency initiated the Critical Characteristics Audit (CCA) program in October 1967 to reexamine, on a one-time basis, those systems and procedures being used to control the quality of the critical aircraft parts, installations, and procedures. This program, which is currently in its final stages, placed emphasis on the evaluation of the manufacturer's quality control system The FAA is presently studying the results of the CCA program as a basis for improving its existing surveillance program

In conjunction with the CCA program, the FAA's Eastern Region was selected in 1968 to study the overall program and submit recommendations for improvement in the production approval and surveillance system. The region has submitted a proposal and this report is presently under consideration at the Washington headquarters

Upon completion of our review of both the CCA and the Eastern Region proposal, specific procedures will be established to ensure that all critical proprietary aircraft parts will be subject to production surveillance and that greater reliance will be placed on the adequacy of PC holders' quality control systems We expect to complete our review by July 1971.

Making improvements in aviation safety is an ongoing activity with the FAA As aircraft become more numerous and complex and performance increases, we have to change our techniques and procedures. The changes are themselves complex and require mature consideration before adoption Often the development and installation cycle must extend over several years Such is the situation in this area in which a change has been in process since 1967 and is now near completion

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We appreciate the opportunity to comment on your draft report

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Sincerely,

Auci B.144 William S Heffelfinger

Acting Assistant Secretary

PRINCIPAL OFFICIALS OF

THE DEPARTMENT OF TRANSPORTATION

RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES

DISCUSSED IN THIS REPORT

	Tenure of office					
	From		То			
DEPARTMENT OF TRANSPORTATION						
SECRETARY OF TRANSPORTATION.						
John A. Volpe	Jan.	1969	Preser	nt		
Alan S. Boyd	Jan.	1967	Dec.	1968		
FEDERAL AVIATION ADMINISTRATION						
ΔΩΜΙΝΙς ΤΡΔΤΩΡ·						
John H Shaffer	Mar	1969	Prese	ht		
David D Thomas (acting)	A110	1968	Mar.	1969		
Gen. William F. McKee	July	1965	July	1968		
ASSOCIATE ADMINISTRATOR FOR						
George S Moore	Apr. 1967 Present					
Arvin O. Basnight	July	1965	Apr.	1967		
NTRECTOR ETTOUT CTANDADDE SED						
VICE.						
James F Rudolph	Oct.	1967	Preser	ht		
James F Rudolph (acting)	June	1967	Oct.	1967		
Clifford W Walker	Apr.	1966	June	1967		
George S. Moore	Apr.	1963	Apr.	1966		
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