

STATEMENT OF JOHN S. KERN, DEPUTY ASSOCIATE ADMINISTRATOR FOR AVIATION STANDARDS, FEDERAL AVIATION ADMINISTRATION, BEFORE THE HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, SUBCOMMITTEE ON INVESTIGATION AND OVERSIGHT, CONCERNING AIRLINE MAINTENANCE. OCTOBER 21, 1987.

Mr. Chairman and Members of the Subcommittee:

I am pleased to appear before the Subcommittee today to discuss airline maintenance practices and FAA maintenance requirements.

The FAA has found that the key requirement for a sound maintenance operation is a strong management commitment on assuring the adequacy of the airline's maintenance system. This need for senior management attention to maintenance was evident prior to deregulation, and remains particularly so today. In fact, one of Administrator McArtor's Impact 88 initiatives calls for increased accountability by airline executives, by asking them to demonstrate the same degree of care and accountability for aircraft maintenance and safety practices as they take for their airline financial statements. The challenge which faces the FAA is to conduct our maintenance surveillance in such a way as to identify those operators who do not insist on strict compliance with the Federal Aviation Regulations or FAR's, and for us to continue to watch them closely, taking strong enforcement action when called for.

In the early years of deregulation our surveillance of airline maintenance practices simply was not adequate either in terms of

level or quality of effort. We reached this conclusion after comprehensive inspections of the industry, as well as critical self-examination of our own efforts. We have since taken strong remedial action to address these deficiencies by increasing our inspector staffing and making a number of refinements in our surveillance program. We now have in place national guidelines which prescribe minimum levels of inspection activity for each segment of the aviation industry. Further, we have instituted special in-depth inspections of all air carriers on a cyclical basis. These inspections are conducted by teams that evaluate a carrier's activities in a level of detail which is simply not feasible in our routine surveillance. Not only will this enable us to better determine compliance with the FAR's, but we expect that it will serve as an important deterrent to those who might otherwise seek to evade their safety responsibilities. Moreover, the national programs we have established provide for an overall surveillance program which is more balanced than before, assuring that adequate maintenance surveillance is exercised over all air carriers.

I would now like to give you a brief overview of the FAA's maintenance requirements which govern all air carriers. These general maintenance requirements are found in Part 121, Subpart L, of the Federal Aviation Regulations, 49 CFR 121, a copy of which is attached to my prepared statement.

An air carrier's maintenance program consists of maintenance specifications, instructions for accomplishing maintenance and inspections, and program management. The initial maintenance specification is determined by a Maintenance Review Board or MRB, which is convened and chaired by the FAA to review and approve an initial maintenance specification for each new model aircraft. The specification is developed by an MRB steering committee consisting of working groups made up of air carriers purchasing the aircraft, the aircraft and engine manufacturers, other component manufacturers, and FAA personnel.

Once the maintenance specification has been developed, the air carrier incorporates the specification into its maintenance control system to schedule accomplishment of each maintenance task within the time limitation specified by the specification. The air carrier submits this schedule for FAA approval at such time as the preparation of its entire maintenance program for the new aircraft has been completed. Formal approval of the specification by the FAA constitutes approval of the air carrier's entire maintenance program as it relates to that model aircraft. When the specification is signed by both parties, it becomes a regulatory document and is enforceable when noncompliance is determined. Revisions to the specifications are individually approved by the FAA or in accordance with special procedures

approved by the FAA allowing the air carrier to revise the specification.

In addition to maintenance specifications, the aircraft manufacturer is required by regulation to provide detailed instructions necessary for the proper maintenance of the aircraft. The FAA reviews these instructions for adequacy and consistency with safe maintenance practices. This process must be completed to our satisfaction prior to delivery of the first aircraft to the air carrier.

The air carrier adopts these instructions as a basis for the maintenance manuals required by the FAR's. Normally, the manufacturer's instructions are adopted verbatim; however, the air carrier may make changes to accommodate operational differences. These manuals are not formally approved by the FAA, but any content which we find objectionable must be corrected before the air carrier's maintenance program for that aircraft is approved. The importance of maintenance manuals cannot be overstated for they provide detailed and general instructions for methods, techniques, and practices for maintenance activities. The manuals are continually revised as a result of service experience, improved support equipment, recognition of the need for more detail, modifications, service difficulties, airworthiness directives and other factors, including changes required by the

FAA. The continuing revision of maintenance manuals is indicative of a strong, viable maintenance program.

Under the FAR's, an air carrier is always responsible for the airworthiness of its aircraft. To ensure airworthiness, an air carrier is obligated to have (either in its own organization or under contract) a sufficient number of trained maintenance personnel, adequate facilities and equipment required to perform maintenance, an ample supply of spare parts, as well as a management and quality control infrastructure.

The FAR's also require that an air carrier have a continuing analysis and surveillance system. A continuing analysis and surveillance system must be able to evaluate how the air carrier's maintenance program is administered and controlled and to monitor the performance of the air carrier's fleet and equipment through data collection, analysis, and a process to take corrective action. It is important to note that the FAR's prohibit an air carrier from contracting out its responsibility for continuing analysis and surveillance.

The proliferation of new air carriers as a result of deregulation has seen an increase in contract maintenance, since many of these carriers did not have an in-house maintenance capability. We have found as a result of our surveillances and in-depth inspections

that the quality of a contract maintenance program is usually dependent upon six factors:

1. Whether the contractor has adequate facilities and equipment to provide all maintenance tasks under the contract.
2. Whether the contractor is certified by the FAA to conduct the maintenance tasks called for in the contract.
3. Whether the contractor has sufficient numbers of trained personnel, certified by the FAA, to perform called for maintenance tasks in accordance with the air carrier's approved maintenance program.
4. Whether the contractor has all the required air carrier manuals and an established system to ensure that manuals are kept current.
5. Whether the contractor has a quality control system to ensure spare parts or repaired parts are received from approved sources, acceptable under the air carrier's approved maintenance program.

6. Whether the air carrier has an audit system to ensure that the contractor actually conducts the maintenance tasks called for in the contract.

As noted, the FAR's permit contract maintenance and there is not an inherent problem with contract maintenance. We are concerned, however, that air carriers using contract maintenance conduct adequate oversight of those maintenance functions.

Another area of concern with air carrier maintenance practices is possible abuse of the minimum equipment list or MEL. The FAR's permit air carriers to maintain a MEL, which grants an air carrier the authority to operate an aircraft with certain items or components inoperative. Experience has shown that the operation of every system or component installed on an aircraft is not necessary when remaining operative instruments and equipment provide continued safe operation for a limited time until repairs are made. For example, an MEL may permit the dispatch of an aircraft with one generator inoperative when the aircraft has multiple electrical systems. The MEL does not include obviously required items such as wings, flaps, engines, or landing gear. The MEL does not include items which do not affect the airworthiness of the aircraft, such as galley equipment, entertainment systems, or passenger convenience items. The FAR's require, however, that all items which are related to the airworthiness of the aircraft and not included on the MEL are

automatically required to be operative.

To determine whether the MEL needs to be tightened up and whether maintenance is being unreasonably deferred, we recently conducted an MEL audit of eleven air carriers. The results of that audit are currently being analyzed, and we are considering strengthening our current requirements to reduce deferral of maintenance items for prolonged periods.

Before closing Mr. Chairman, I would like to briefly focus on the issue of record keeping by air carriers. We sometimes hear that FAA inspectors spend too little time inspecting aircraft and too much time following paper trails. You may read or hear, especially when the FAA is seeking enforcement action as a result of an inspection, that the violations are only "paper work" violations. Don't be misled. Accurate and comprehensive record keeping is at the heart of aviation safety. The FAA believes that an effective maintenance program requires an effective record keeping system. It would be impossible and impracticable for the FAA to even attempt to inspect every aircraft in the civil aviation fleet. Therefore, we must be able to access an air carriers records and they must be timely and accurate in nature, for example, the current status of airworthiness directives.

Each air carriers is required to establish in its manual a system

which describes its methods of operation and procedures which all personnel employed by the carrier must follow to ensure compliance with the FAR's. Specifically, the air carrier must establish and maintain a maintenance recording system by which its personnel or FAA inspectors can retrieve a description of any work performed on an aircraft or a reference to data acceptable to the FAA.

Regulations require the air carrier to retain extensive records containing among other items the total time in service of the airframe; the current status of life limited parts of each airframe, engine, propeller, rotor, and appliance; the time since the last overhaul of all items installed on the aircraft which are to be overhauled on a specified time basis; the current inspection status of the aircraft; current status of applicable airworthiness directives, including the method of compliance; and current, major alterations to each airframe, engine, propeller, rotor, and appliance. This information is critical to overseeing a continuing airworthiness program, and inadequate or poorly kept records can easily lead to a failure in performing necessary maintenance and repairs.

With regard to the importance of good record keeping, I am pleased to note that Congress recently enacted legislation which provides significant criminal sanctions for the intentional failure to file reports required by the FAA as well as for the falsification of

such reports. The legislation provides both significant fines and prison terms up to five years for a violation. We think this measure helps focus attention on the seriousness which must be attached to accurate and comprehensive record keeping.

Mr. Chairman, that concludes my prepared remarks. I would be pleased to respond to any questions you or other Members of the Subcommittee may have.