

STATEMENT OF
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BEFORE

SUBCOMMITTEE ON AVIATION
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES

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**THE FEDERAL AVIATION ADMINISTRATION'S OVERSIGHT OF
OUTSOURCED AIR CARRIER MAINTENANCE.**

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Mr. Chairman and Members of the Subcommittee

I would like to thank you for the opportunity to share with you what I know about aircraft maintenance and the need for effective Federal aviation oversight of aircraft maintenance. All who travel, regardless of the mode of transport, believe that the federal government has in place rules and regulations that provide for their safe travel. This point has been made clear to me after meeting with survivors and surviving family members of transportation accidents. Also clear after a through review of these accidents is the fact that often times we have failed to meet not only the public's expectations but also failed to deliver on what is required under the regulations. Today we enjoy a travel system that is the safest in our history. However if we look back on the 3 accidents that have occurred in the past 4 years involving commercial 121 air carrier operations we find that our aircraft maintenance process and procedures to be lacking and we also find that the Federal Aviation Administration failed to adequately oversee these operators. Please note that the most current of the 3 that I mentioned, occurring in December of 2005 is still under investigation by the NTSB and the information I used was obtained from the public docket. I have not included the Comair accident in Kentucky in this discussion. If we were to take a look back in time and review how we reached today's outstanding safety rate we would find an industry and government partnership that has driven material standards to new extremely high levels of performance. The same is true with aircraft power plants. This same type of industry/government partnership has progressed to the point that it is common for these power plants to deliver a level of reliability that was unthinkable 20 years ago. This same model of cooperation exists in new processes of manufacturing such as friction stir welding that is both lighter and stronger than existing methods of joining the components of an aircraft together. This cutting edge technology is in use today on a production aircraft because of the FAA's abilities within the aircraft certification division to evaluate new processes to insure that these processes meet or exceed the existing rules. A quick review of the NTSB data base reveals very few material failure events in the last 10 years.

This picture of good performance by the FAA starts to change soon after the aircraft leaves the manufacturer and enter into operating environment which is overseen by a different group within the FAA. This group called Flight Standards has a very difficult task of overseeing our nation's aircraft in an environment that is constantly changing. Flight standards are responsible for everything involving aircraft operations up to the interface with air traffic control. This is a difficult and challenging task and one that the NTSB is constantly looking into after an accident or incident. Since the beginning of the FAA in 1958 the method of oversight has been the highly visible visits to a facility or aircraft by an aviation safety inspector who would make a determination on whether or not you were following the proper procedures and if not find a way to return to compliance with the procedures. After deregulation of the airlines the FAA soon faced an industry that was expanding rapidly without the agency's ability to keep up. Without the ability to add resources as needed they soon could not accomplish what congress and the traveling public expected of them. The FAA has tried many different approaches leading to today's Air Transportation Oversight System which may provide the FAA the ability to use data collection methods to provide indicators of operations that may need help. Clearly such a system could provide the FAA inspectors an indicator of where they need

to look deeper into the operation. However I must comment that this system as available today is not mature enough to replace the inspector's actual visit and spot checking however I believe a mature system can have a substantial impact on inspector workload. What does it take to provide oversight of an air carrier maintenance process? Since air carrier maintenance processes have several elements it will require an oversight system to address the different elements. A robust data collection and analysis system can provide indicators of issues in all areas but not equally. For example the industry has long used component reliability data to increase aircraft availability. An area that doesn't lend itself to data collection is in the area of following published procedures. Over many years we have focused on flight crews following procedures but we have not put anywhere that amount of effort into the maintainers following procedures despite a number of accidents and incidents where not following procedures was identified as an issue in causation. In Fact the entire area of Instructions for Continued Airworthiness often called maintenance manuals is in need of review by the FAA. These Instructions for Continued Airworthiness are the basis for the air carrier's maintenance program is often poorly explained or they have not been validated or verified. This has been a major contributor in several recent 121 air carrier accidents. It is often the professional aircraft mechanic who takes the correct actions in making repairs and not following the often inaccurate maintenance manual [I C A]. This also adds an additional problem in that it promotes not following the published procedures. I would also like to draw the Committee's attention to the fact that there have been several accidents involving maintenance manual problems and to date there has not been a major review of the maintenance manual [I C A] development process. One additional thought on the ATOS approach, many if not most aviation safety inspectors do not believe in this system [I do]. As a result I believe the FAA management will be required to provide a much higher level of initial training in an effort to get as high a confidence level as they can from as many air safety inspectors as possible. For ATOS to be successful most ASI's will need to believe in the process. The ATOS will also need to be expanded as the ASI's discover more necessary data points to be included in the process for analysis.

Both today and into the future the Air safety inspectors will need to continue to conduct hands on inspections of repair facilities although the ATOS process will help make these visits more focused. There are events that occur within the maintenance process that can only be discovered by observation. I have been involved in differences of opinion between maintainers and management that only because of the ASI's involvement did a complete discussion occur which resulted in a satisfactory outcome. Also when an aircraft is in a hanger for a heavy maintenance visit it can be very difficult to conduct surveillance of all the work accomplished but I also know from years of working in that type of facility that a very accurate picture of what has transpired can be gleaned by being present during the final operational checks as-well as observing the acceptance check flight if required. This is the point that many of the shortcomings in both personnel and process will become clear and the only way to gather the required information is to be present. Today this has become a greater challenge with so much of the heavy aircraft maintenance performed outside of the United States. I'm told that some of these located outside the U.S. are only visited once per year. Frankly that is not enough presents to

insure compliance. Add to this that there may be more air carrier personnel monitoring the spare parts inventory than personnel that monitor the actual maintenance.

No discussion on oversight of repair facilities would be complete without discussing the mechanics who accomplish the repair tasks and their qualifications. Today I see problems on several fronts. First there is a real shortage of qualified maintenance personnel. In the past several studies have predicted a shortage of qualified maintenance personnel. We have reached that point today. After years of worker layoff's many mechanics have found employment in other industries. In fact a recent recall of displaced employee's from a major airline found about half decided not to return to aviation. Add to this the fact that our training providers report enrollments down considerably with a number of facilities closed or closing. This is in part caused by the high cost of the required training. It can be difficult to justify spending \$25,000.00 for education for a job that the starting pay is \$15.00 per hour and top out at \$25.00 for most mechanics. Additionally the industry would like to have a person coming out of school that is trained on the current commercial fleet. However the majority of new mechanics will not be provided employment in commercial aviation so the FAA is hard pressed to change the present requirements. Some organizations have joined together in an effort to create standards that raise the bar on education and training. Most notable is the efforts of SAE International and the Professional Aviation Maintenance Association in their Development of advanced standards for maintainers. One Example of what they have accomplished is in the training and education required of a person who would approve and or repair a composite material structure. Modern aircraft have more and more composite materials built into the structure but the FAA has been unable to keep up to the industry in its speed in adopting this material for aircraft. By partnering with SAE international and the Professional aircraft maintenance Association there is now developed an education and training standard for all to follow if they wish. This effort shows some real promise in helping the industry through the expected manpower shortages. The aviation operators are not alone in needing new employees. Within the past few weeks I noticed on the FAA's website about 100 jobs for badly needed aviation safety inspectors. I said badly needed because the number of ASI's has declined from attrition and other reasons and it is causing problems in both safety inspections and in approvals for work to be accomplished which can be quite expensive. Some FAA offices try to move resources around to made do with some limited success. Also I mentioned earlier that I believe additional training would be required in order to bring most ASI's to a higher level of confidence in the ATOS system. Presently the only way the FAA can provide this training is to ignore the present job requirements while the ASI is in training. Additionally the 100 or so new hire inspectors will require time and training before they can provide any meaningful impact on this problem. Also note that these new positions will not bring the ASI headcount up to the levels of 3 years ago. The agency will still need a few hundred more to return to the 2002 level.

Today we are again experiencing growth across the entire aviation sector and we again find the FAA tiring to catch up to industry expansion. Additionally there are a number of proposed new entrant carriers waiting in the approval process for certification.

In order to accomplish the task that the congress and the American public expect of the agency the resources must be available. At the present time the agency does not have the required resources. Ironically this comes at a time when the agency has management team that is willing and capable of tackling these difficult issues.

Thank You for the time to share my views on this subject