

Testimony of Clyde R. Kizer
Retired Aerospace Executive

Before the

Committee on Transportation and Infrastructure

Subcommittee on Aviation

Regarding

**FAA AIRCRAFT CERTIFICATION: ALLEGED REGULATORY LAPSES IN THE
CERTIFICATION AND MANUFACTURE OF THE EA-500**

September 17, 2008

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BACKGROUND

U.S. Navy (1960-1982)

Active Duty (1960-1974)

Reserves (1974-1982)

Naval Officer/Aviator/Experimental Test Pilot

Retired with the rank of Captain

I served two combat tours in Southeast Asia, flew as an Experimental Test Pilot for two tours at the U.S. Naval Air Test Center, NAS Patuxent River, Maryland, served as the Executive Officer then Commanding Officer of a squadron and retired with the rank of Captain with over 30 service awards.

United Airlines (1974-1988)

Engineering Test Pilot (1974-1982)

Director Engineering (1982-1984)

Vice President Technical Services (1984-1988)

My responsibilities included all aspects of engineering, quality assurance, quality control, flight test and technical publications for the (then) largest air carrier in the free world. During my tenure of technical leadership the fleet underwent unprecedented growth from 7 aircraft models with 7 different engine types to 22 aircraft models with 23 different engine types; the first National Aviation Safety Program inspections were conducted; United conducted a number of STC and alternate means of compliance initiatives; and, the airline never received a civil penalty for failure to comply with regulatory requirements.

Air Transport Association (1988-1990)

Vice President Engineering and Maintenance

During my tenure at ATA, I initiated and led the activities of the Airworthiness Assurance Task Force following the structural loss of a significant portion of upper fuselage skin on a 737 aircraft. Other responsibilities included industry interface for all U.S. Government technical organizations (military and civil); coordination of general industry activities related to certification, regulation, and rule making; interface for international air transport and regulatory activities (IATA, ICAO, JAR, etc.);

interface for general airline/manufacturer activities (Boeing, Douglas, Lockheed, Airbus, Convair, etc.); and coordination with all other industry associations (union, civil, technical, professional, etc.).

Midway Airlines (1990-1992)

Senior Vice President Operations

I served as Senior Vice President Operations (flight operations and maintenance) for Midway Airlines until Midway declared bankruptcy in 1992.

Airbus Industries North America---Customer Services (1992-2004)

President/COO

Responsible for all customer service activities (training, spares and material control, publications, field engineering, maintenance, engineering, regulatory coordination, contract administration) for North America Airbus operators, as well as for training and spares/material control for South America Airbus operators.

ORGANIZATIONS (some no longer current since retirement)

American Institute of Aeronautics and Astronautics (AIAA): former member of the Honors and Awards Committee

Society of Automotive Engineers (SAE)

Society of Experimental Test Pilots

Flight Safety Foundation

Sperry Award Committee

Quiet Birdmen

BOARDS

Chairman/Vaughn College Board of Trustees (1997 to present)

Chairman/Discovery of Flight Foundation---in support of Wright Experience/Wright aircraft reproductions (2005 to present)

Board of Trustees/Council on Aviation Accreditation (2004)

Chairman/Doll Technology Board of Directors (2003 to 2006 approximate dates)

Member Board of Directors/TIMCO (MRO facility) (2004 to 2006 approximate dates)

Congressional Medal of Honor Society Golf Classic/Executive Committee (2005)

EDUCATION/TRAINING/DESIGNATIONS

Bachelor of Science Degree/Bio-Chemistry/Eastern Michigan University (1960)

Designated: U.S. Naval Aviator (1961)

Designated: U.S. Naval Air Intelligence Officer (1963)

Designated: Special Weapons Handling Officer (1964)

Graduate: U.S. Naval Test Pilot School (1965)

Designated: U.S. Naval Aeronautical Engineer (1968)

Designated: U.S. Naval Weapons Systems Procurement Officer (1968)

Senior Executive Program/Stanford University (1986)

FAA LICENSES

Airline Transport Pilot
Airplane Multi-engine/Land
B-727, B-737, B-747, B-757/767, DC-8, DC-10
Commercial Privileges
Airplane Single Engine Land and Sea
Rotorcraft-Helicopter SK-61

Single-engine/Sea
Rotor-craft: Helicopter
Flight Engineer Turbojet Powered
(note: rated in B-747, DC-10 and DC-8 aircraft by UAL)

INDUSTRY ACTIVITIES

FAA Airworthiness Directive Compliance Team---2006-15-15 (2008)
FAA Airworthiness Directive Compliance Team---AD Process Review Team (2008)
National Research Council/USAF Non-Tactical Aircraft Re-engine Study (2006)
National Research Council/USAF Non-Tactical Aircraft Winglet Study (2007)
National Research Council/U.S. Aviation Research Capabilities Study (2005)
National Research Council/U.S. Air Transport Industry Safety---Technical Study (2004)
Ad Hoc Team to Review V LJ/UA Certification/Operational Considerations: Nicholas A. Sabatini,
Associate Administrator for Aviation Safety (~2004)
U.S. Congress, Office of Technology Assessment/ *Safer Skies With TCAS: Traffic*
***Alert and Collision Avoidance System*—A *Special Report* (1989)**

EMPLOYMENT STATUS

Although I provide my time, experience and opinions to those who request it on a regular basis, I am retired and, by choice, have never received pay (other than expenses) as a consultant. Except for my position on the Board of Directors at TIMCO, all of my industry activity, since retirement, has been with government, government sponsored, or non-profit, organizations related to improving safety, technology and operations within the aerospace industry.

STATEMENT

My name is Clyde Richard Kizer and my statements reflect observations, facts and opinions garnered over a 44 year career in the aerospace industry.

I realize that the focus of these hearings is on the certification of the Eclipse EA-500. My statement today relates to the requisite requirement for the concept of “alternate method of compliance” to assure a vibrant environment of innovative engineering and technology development for the aerospace industry. Absent the application of technical vision and the exploration of new materials, concepts and processes our nation will rapidly fall behind in this globally critical industry.

My comments relate specifically to the need for a methodology that allows consideration of alternate means of compliance within the regulatory process. My experience and training relates predominately to the arena of airline aircraft continued airworthiness, and I will focus my comments to that portion of the industry, but the concepts that I discuss have value for all venues of technical development, albeit with differing practical priorities, frequencies of application and regulatory oversight requirements.

Equally important to the success of the aerospace industry as the alternate method of compliance is the development of, and adherence to, minimum standards for regulatory compliance to assure the safety of the aircraft, the public and the national air space.

The remarkable safety record of the U.S. Air Transport Industry is a result of the robust process of communications, coordination and exchange of technical information that exists between the operators, the manufacturers and the regulatory agency. No single entity within these constituents can assure the desired level of safety independently. The success of the endeavor depends on effective collaboration. The free exchange of technical information provides a venue for innovative alternative technical resolution of potential problems from differing perspectives of responsibility. Over time, this process allows a variety of methods for technical problem resolution from which it is possible to develop a “best practices” resolution for standardization, effectiveness and efficiency. Absent such an approach standardization might potentially be achieved by forced adherence to the least effective method.

Over decades of commercial air travel many new technologies have been developed to improve the safety and efficiency for the travelling public. Emerging technologies demand a conservative approach for application, operation and regulatory control to assure that the safety of the system is not compromised. That conservative approach results in the establishment of minimum standards of performance that protect the industry while allowing flexibility in the development of new technologies. Unfortunately, the term “minimum standards” occasionally connotes an atmosphere of laxity when, in fact, it is just the opposite---a restrictive set of requirements that must be met in the very conservative approach to development of new technologies and/or methods for resolution of technical problems.

It is a general truth that no two aircraft leave the manufacturer’s production line in exactly the same configuration. Additionally, once an aircraft enters service, no two aircraft of similar type are in exactly the same configuration---within a given airline, or between airline fleets. The responsibility of the airlines is to maintain their aircraft so that they conform to the type design and type certification requirements that were established to assure airworthiness for the certification and production of

commercial aircraft. This requirement for conformance is termed “continued airworthiness”. The continued airworthiness process includes incorporation of methods to address any action that modifies the original type certification requirements, such as Airworthiness Directives, Supplemental Type Certifications, etc. The airlines dedicate considerable technical resources for maintenance and engineering activities to meet this responsibility.

When technical problems are defined and addressed by manufacturer service bulletins, or regulatory requirements, the specified means of corrective action frequently requires variations due to configuration differences, material applications, or other considerations. When corrective actions are mandated by the FAA, generally by issuance of an Airworthiness Directive (AD), such actions frequently include a means to employ differing methods, materials and/or timing to accomplish the mandatory action. These alternatives are allowed only after approval by the FAA Aircraft Certification Office designated in the AD. FAA approval for alternative methods must be obtained prior to the required date for completion of the action defined in the AD. This approach is prescribed in 14 CFR part 39 as the Alternative Method of Compliance, or AMOC, process. The AMOC process allows accommodation for alternatives that might not have been known, or considered at the time the AD was written. The primary requisite for this process rests with a determination that the alternative provides an acceptable level of safety that is equivalent to that required by the AD.

It is obvious that the AMOC process allows consideration for differing technical expertise, varying operational experiences, new technologies and innovative methodologies while protecting the safety and efficacy of the air transport system and not compromising the responsibility, or prerogatives, of the Regulatory Authority. The intent of the AMOC process is to maintain, or improve, the safety of aircraft and the industry while allowing the employment of technical innovation and new technologies to resolve technical problems. Over many years, the concept of alternative methods of compliance has proven to be a safe and effective approach for regulatory compliance. The AMOC process has provided essential alternatives that are crucial to the air transport industry and my experience is that it is equally essential for general aviation.