

INTRODUCTION TO THE FAA AVIATION SAFETY AND REGULATION

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The FAA

A Brief History

Regulation of civil aviation activities began with the Post Office Department in 1918 with the establishment of regularly scheduled airmail service between New York, Philadelphia and Washington. However, it was not until 1926 that the Air Commerce Act initiated a civil airway system with navigational aids. This Act, very important in the development of US civil aviation, stipulated that airplanes and pilots were to be *registered, examined and certificated*.

The *Civil Aeronautics Act* of 1938 established three agencies, requested by the airlines, to regulate air safety and economics. These were:

- * Civil Aeronautics Authority to legislate safety and economics.
- * Administrator of Aviation to implement safety regulations
- * Air Safety Board to investigate accidents.

In 1940, the Civil Aeronautics Act was amended, because of duplication in the above three agencies. This amendment established the *Civil Aeronautics Administration* (CAA) to be responsible for all safety regulations and the *Civil Aeronautics Board* (CAB) to be responsible for all economic regulations and accident investigations. The CAA was charged with generating and maintaining *Civil Air Regulations* (CARs) governing every aspect of civil aviation from the design and manufacture of the aircraft to its operation. However, a separate agency, the Civil Aeronautics Agency was established to enforce the CARs.

In 1958, the *Federal Aviation Act* was enacted which established the *Federal Aviation Agency* (FAA), a separate government agency reporting directly to Congress and the President. Its functions were similar to those of the CAA with the designation of the CARs changed to Federal Aviation Regulations (FARs). Many of the CARs became FARs with minor changes. For example, FAR Part 23 which contains the criteria for the design of small airplanes was formally CAR 3, to be found in the *Civil Aviation Manual 3* (CAM 3). Airplanes originally certified under CAR Part 3 continued to be manufactured after 1958 under the requirements of that regulation rather than FAR Part 23. The CAB was left essentially unchanged by the Act of 1958.

In 1966, President Lyndon Johnson created a twelfth cabinet department, the Department of Transportation and the FAA was placed under this Department. At the same time, the *National Transportation Safety Board* (NTSB) was established and given the responsibility for accident investigations (for all modes of transportation). The responsibilities of the CAB were redefined to include only economics of civil air transportation including route structure, fares, subsidies, mergers, accounting and statistical analyses.

In 1978, Congress passed the *Airline Deregulation Act* which was implemented gradually over the next seven years resulting in the demise of the CAB in 1985.

International Civil Aviation Organization (ICAO)

The International Civil Aviation Organization (ICAO) was formed in 1947 after it was ratified by 26 countries. By 1975, it had grown to a membership of 131 nations. ICAO is divided into an Assembly, a Secretariat, and a Council. The council is the governing body and has been effective in establishing standardized procedures and practices in air transportation activities. These standards cover such areas as licensing, flight rules, airworthiness standards, navigational charts, meteorological data, radio communications, and airport design and facilities. More recent items added to ICAO's standards are in the areas of aircraft noise and security. A recent action of the ICAO in amending Annex 6 on the Operation of Aircraft will require all commercial transports and general aviation aircraft over 12,500 lb, or those carrying more than nine passengers, to have a ground proximity warning system starting January 1, 1999. The current rule requires only transports having a gross weight of more than 33,000 lb to have GPWS - and only if they were brought into service after July 11, 1979.

The Federal Aviation Administration (FAA)

The Federal Aviation Administration, with headquarters in Washington, DC, is the federal agency which regulates nearly all phases of aviation ranging from the design and manufacture of aircraft to their operation. To put it another way, the FAA licenses aircraft and pilots and controls the operation of the aircraft by the pilots. Aviation activities which come under the responsibilities of the FAA include:

- * Air traffic control system including:
- * Installation and maintenance of voice and navigational radio systems
- * Operation of flight service stations
- * Operation of Radar facilities
- * Operation of airport control towers
- * Issuing of pilot medical certificates
- * Licensing of pilots

- * Gathering, analysis and documenting of statistical data relating to airplane operations.
- * Establishment of standards (FARs) to which aircraft must be built.
- * Regulation of the FARs to assure that an aircraft complies with the applicable standards.
- * Monitoring all aspects of aviation safety and issuing communications and regulations as needed to assure safety. The FAA can ground an airplane or a pilot if either is deemed unsafe.
- * Research and Development relating to all of the above.
- * Airport construction, operation and security
- * Certification of any domestic air carrier or operation within the US.
- * Foreign carriers operating US Registered aircraft

Although accident investigations are not a responsibility of the FAA, the NTSB to provide expertise in analyzing air crashes frequently calls upon it.

The FAA conducts major operations in Washington, DC, Oklahoma City, OK, and Atlantic City, NJ. All of the FAA's activities are overseen in their headquarters in Washington while activities relating to medical aspects of aviation are to be found in Oklahoma. The FAA's Technical Center, located along side of the airport which serves Atlantic City, conducts, and contracts for, research relating to the operation of aircraft. Many other FAA facilities and offices exist to serve various regions of the US.