

Frederick Rentschler said engines were responsible for 75% of the progress in aviation.

# Points to Remember about Frederick Rentschler

- Rentschler moved aviation out of the adventurous era by creating dependable air-cooled engines.
- He took the name Pratt & Whitney Aircraft Company, which combined the Accuracy of the P&W Company with Dependability of the Wasp Engine.
- He and William Boeing established commercial aviation.
- His JT3/J57 revolutionized military aviation and created luxury jet aircraft travel with B-707 and DC-8

# Rentschler Challenge-2: Getting into the Jet Age (1945)

- Technology
- Competition
- Knowledge of Customers' Needs
- Prospects for immediate business
- Years ahead / behind competition
- Not much in hand
- GE, Westinghouse, Rolls-Royce, Allison, Allis-Chalmers, de Havilland, Bristol, Wright Aero
- Good
- None
- Five years behind

## ***Rentschler Engine Statement***

One might think that, when an engine manufacturer says most of the progress in aviation has been due to the engine, the engine man is tooting his own horn. However, when one looks back on the history of commercial aviation, one sees the DC-3 as the first practical money-making aircraft with its twin-engine low wing configuration as the beginning of a trend all the way up to today where the most economical configuration still is a twin-engine, low wing aircraft. The major difference is the aircraft is bigger, which carries more passengers per flight, and the aircraft has engines considerably more powerful than those in the DC-3 type aircraft in the early 1930s.

## ***Points to Remember about Frederick Rentschler***

Frederick Rentschler left the Presidency of Wright Aeronautical because the Board of Directors were mostly bankers seeking a return on investment quickly in the near term rather than investing in research now for a payoff way into the future. After leaving Wright Aeronautical Corporation, Rentschler (along with George Mead) in 1925 formed Pratt & Whitney Aircraft Company with the financial help from The Pratt & Whitney Company in Hartford, Connecticut. The Hartford-based Pratt & Whitney Company was famous throughout the world as a manufacturer of precision machinery. Later in 1929 Rentschler and William Boeing formed United Aircraft & Transport Company – which provided coast-to-coast air service.

Just prior to WWII he helped to organize the automotive industry to build aircraft engines. Over 360,000 P&W aircraft engines were produced in support of the War effort. After WWII he saw that the aircraft engine business had changed. He was accustomed to competing with Wright Aeronautical, Rolls-Royce and Allison Division of General Motors but now the Jet Era had arrived and the new competitors had all of the gas turbine business – General Electric, Westinghouse and Allis-Chalmers. These three companies were brought into the aircraft engine business to develop gas turbines while the established engine companies focused their efforts on providing piston engines to win the air war. General Electric, Westinghouse and Allis-Chalmers had substantial background in steam and gas turbines. These companies were logical choices to conduct the aircraft gas turbine development during the War.

On the other hand in 1945, Wright Aero and P&W, whose only business was aircraft engines, faced firmly established competitors for whom aircraft engines were a sideline but now dominated the aircraft gas turbine market.

## ***Rentschler Challenge-2: Getting Into the Jet Age (1945)***

Rentschler's first challenge was the founding of Pratt & Whitney Aircraft Company 20 years earlier in 1925. When he assessed P&W's business outlook in 1945, the results did not exactly create a stampede of investors to get a part of the action. His gas turbine technology was five years behind that of his competitors. He did understand the military and commercial customers' needs better than his new competitors because of his aviation experience. However, he could not see much military business in the near future because of P&W's late start in gas turbines and certainly no obvious commercial gas turbine opportunities on the horizon. It also looked as if the piston engine business had only another five years to go – which would carry the company for a while. In general the future looked bleak.