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# Pratt Whitney Radial Engines

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Pratt and Whitney R-2800 - America's Indestructible WWII Aircraft Engine Pratt  
Whitney R-4360 WASP Major 28-Cylinder 71L Supercharged 4,300hp  
3,200 kW Pratt Whitney R-985 Wasp Junior - startup Pratt Whitney  
R-4360 Radial Engine Backfire Radial Engine Startup Pratt Whitney R985  
Replacing Cylinder on an R-985 Pratt Whitney Radial Engine Pratt  
Whitney's NEW Engine Will DESTROY The Entire Aviation Industry! Radial Engine  
Startup Pratt Whitney R985 (Wasp Junior) B-52 Re-Birth from Boneyard  
Sparks Memories for Former Pratt Whitney Pilot Best Radial Engine Sounds,  
Volume 1 Big Old PRATT and WHITNEY ENGINES Cold Straing Up and Sound Pratt  
Whitney R4360 Power-Up, July 12, 2008 Pratt Whitney R 1340  
Restoration and initial start up Pratt Whitney R-4360 Wasp Major and  
Continental R- 975 restoration Insane Aircraft Engines Sound That Will Shake Your  
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Whitney R-4360 28 Cylinder Radial Aircraft Engine Cutaway PRATT  
WHITNEY R-4360 WASP MAJOR AIRCRAFT - Airplanes powered by this radial engine  
Cost to Rebuild Pratt and Whitney R1830 Radial Engine, WW2 PBV Catalina,  
Commemorative Air Force PRATT WHITNEY R-3460 RADIAL ENGINE. 28  
cylinders and anywhere from 2,650 to 3,800 HORSEPOWER Pratt and Whitney Radial  
Engine-"A Modern Marvel" Pratt Whitney R-4360 - The 28-Cylinder engine  
(The Wasp Major) Big Old AIRCRAFT ENGINES Cold Start and Sound I Pratt and  
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R-2800

History of the Aircraft Piston Engines  
All Major Aircraft Power Plants, from the Wright Brothers to the Present Day  
The Military Remapping of Industrial America  
Not Much of an Engineer  
Powering the Luftwaffe

*Pratt Whitney Radial Engines* OMB No. 2693521457860  
edited by

## **FREEMAN ARELLANO**

Commercial Aircraft Propulsion and Energy Systems Research  
University-Press.org  
The Engines of Pratt Whitney: A Technical History describes the evolution from piston engines to gas turbines by the engineers who created those engines. Included are hundreds of archival photographs, as well as over a dozen tables listing specifications and applications.

Convair B-36 Peacemaker Manual Smithsonian Institution

About the aircraft piston engine, the Pratt and Whitney R-2800, this volume provides background information, and delves into the design challenges faced by the engineers when building it. It also covers propellers, carburetors, and the aircraft the R-2800 powered.

**Mustang Designer**  
Springer Science & Business Media

A reference work describing every major aeroplane engine manufacturer throughout the world, together with its products, from the pioneering days to the recent engines. Each aero engine is within its technological and historical context with power plants of all nationalities illustrated. The human element of the story is also included with the personal struggles that resulted in such notable engines as the Rolls-Royce Merlin and the Pratt & Whitney P6 being related.

*Improving the Efficiency of Engines for Large Nonfighter Aircraft* Amer Inst of Aeronautics & The primary human activities that release carbon dioxide (CO<sub>2</sub>) into the atmosphere are the combustion of fossil fuels (coal, natural gas, and oil) to generate electricity, the provision of energy for transportation, and as a consequence of some industrial processes. Although aviation CO<sub>2</sub> emissions only make up approximately 2.0 to 2.5 percent of total global

annual CO<sub>2</sub> emissions, research to reduce CO<sub>2</sub> emissions is urgent because (1) such reductions may be legislated even as commercial air travel grows, (2) because it takes new technology a long time to propagate into and through the aviation fleet, and (3) because of the ongoing impact of global CO<sub>2</sub> emissions. Commercial Aircraft Propulsion and Energy Systems Research develops a national research agenda for reducing CO<sub>2</sub> emissions from commercial aviation. This report focuses on propulsion and energy technologies for reducing carbon emissions from large, commercial aircraft—single-aisle and twin-aisle aircraft that carry 100 or more passengers—because such aircraft account for more than 90 percent of global emissions from commercial aircraft. Moreover, while smaller aircraft also emit CO<sub>2</sub>, they make only a minor contribution to global emissions, and many technologies that reduce

CO2 emissions for large aircraft also apply to smaller aircraft. As commercial aviation continues to grow in terms of revenue-passenger miles and cargo ton miles, CO2 emissions are expected to increase. To reduce the contribution of aviation to climate change, it is essential to improve the effectiveness of ongoing efforts to reduce emissions and initiate research into new approaches.

### **Pratt & Whitney's Major Miracle**

The Engines of Pratt & Whitney A Technical History  
Some of the most significant engineering and technological breakthroughs of the 20th century centered on the development of piston aero engines from 1920 to 1957. This book explains in detailed, well-illustrated, and easy-to-understand terms how these piston-powered radial-engine airliners advanced rapidly. The aircraft originated with fabric-covered fuselages with wooden wings and morphed into all-metal Ford Trimotors as the world's first true "modern airliner," the Douglas DC-3, long-range four-engine transoceanic flying

boats. Finally, the ultimate "Queens of the skies" Lockheed Constellations, Douglas DC-7s, and Boeing Stratocruisers flew at the zenith of the piston age in the mid-to-late 1950s. Many magnificent aircraft bridged the gap from small single-engine airliners carrying six passengers in the 1920s to large long-range, four-engine landplanes carrying 60-to-80 passengers and linking all the world's continents by air in the 1950s. This book not only traces the technical evolution of every radial-engine powerplant used over that time span but also includes interesting and fact-filled sidebars that detail what it was like flying aboard each generation of these aircraft. In 1948, the largest radial piston engine ever produced entered airline service, the mighty 3,500-hp 28-cylinder Pratt & Whitney R-4360; it is one of 12 different radial engines covered in-depth by the authors of this book. With one author having been an airline pilot and the other an air racing enthusiast and lifetime member of the Aircraft Engine Historical Society, this book offers readers

the best of both worlds. Colorfully illustrated stories of flying aboard the world's greatest piston-powered airliners are interwoven with detailed yet easy-to-understand descriptions and graphics showing the intricacies of high-performance piston radial engines. The advancement and success of America's air transportation system can be linked directly to the concurrent growth of long-range, high-speed airliners and their revolutionary powerplants, and this book tells the compelling story of aviation progress and development for the very first time.

### **R-4360**

#### Ginter Books

Please note that the content of this book primarily consists of articles available from Wikipedia or other free sources online. Pages: 27. Chapters: Pratt & Whitney R-2800 Double Wasp, Pratt & Whitney R-985 Wasp Junior, Pratt & Whitney F135, Pratt & Whitney JT8D, Pratt & Whitney J58, Pratt & Whitney PW1000G, Pratt & Whitney J52, Pratt & Whitney R-4360 Wasp Major, Pratt & Whitney J57, Pratt & Whitney F100,

Pratt & Whitney PW4000, Pratt & Whitney R-1830 Twin Wasp, Pratt & Whitney R-1340 Wasp, Pratt & Whitney TF30, Pratt & Whitney JT3D, Pratt & Whitney R-1860, Pratt & Whitney PW2000, Pratt & Whitney R-1690 Hornet, Pratt & Whitney PW1120, Pratt & Whitney F119, Pratt & Whitney JT9D, Pratt & Whitney T34, Pratt & Whitney R-1535 Twin Wasp Junior, Pratt & Whitney X-1800, Pratt & Whitney R-2000 Twin Wasp, Pratt & Whitney PW6000, Pratt & Whitney J75, Pratt & Whitney JT12, Pratt & Whitney R-2180, Pratt & Whitney R-2060 Yellow Jacket, Pratt & Whitney XH-3130, Pratt & Whitney T73, Pratt & Whitney PT1.

Excerpt: The Pratt & Whitney R-985 Wasp Junior is a series of nine-cylinder air-cooled radial aircraft engines built by the Pratt & Whitney Aircraft Company from the 1930s to the 1950s. These engines have a displacement of 985 cu in (16.14 L); initial versions produced 300 hp (224 kW), while the most widely used versions produce 450 hp (336 kW). Wasp Juniors have powered numerous smaller civil and military aircraft, including small transports, utility aircraft,

trainers, agricultural aircraft, and helicopters. Over 39,000 of these engines were built, and many are still in service today. Pratt & Whitney developed the R-985 Wasp Junior as a smaller version of the R-1340 Wasp to compete in the market for medium-sized aircraft engines. Like its larger brother, the Wasp Junior was an air-cooled nine-cylinder radial, with its power boosted by a gear-driven single-speed centrifugal supercharger. Its cylinders were smaller, however, with a bore and stroke of in (132 mm), giving a...

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Springer

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[Allied Aircraft Piston](#)

[Engines of World War II](#)

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**RADIAL ENGINE,  
BRISTOL HERCULES,  
BRISTOL PERSEUS,  
BRISTOL MERCURY,  
BRISTOL JUPITER,  
BRISTOL PEGASUS,  
BRISTOL PHOENIX,  
BRISTOL TAURUS,**

Sae International

The PB2Y Coronado was a

large flying boat patrol bomber designed by Consolidated Aircraft. After deliveries of the PB1Y Catalina, also a Consolidated aircraft, began in 1935, the United States Navy began planning for the next generation of patrol bombers. Orders for two prototypes, the XPB2Y-1 and the Sikorsky XPBS-1, were placed in 1936; the prototype Coronado first flew in December 1937. After trials with the XPB2Y-1 prototype revealed some stability issues, the design was finalized as the PB2Y-2, with a large cantilever wing, twin tail, and four Pratt & Whitney R-1830 radial engines. The two inner engines were fitted with four-bladed reversible pitch propellers; the outer engines had standard three-bladed feathering props. Like the PB1Y Catalina before it, the PB2Y's wingtip floats retracted to reduce drag and increase range.

*Radial Engines* SAE International

"The Wright Brothers' Engines and Their Design" by Leonard S. Hobbs. Published by Good Press. Good Press publishes a wide range of titles that encompasses every genre. From well-known

classics & literary fiction and non-fiction to forgotten—or yet undiscovered gems—of world literature, we issue the books that need to be read. Each Good Press edition has been meticulously edited and formatted to boost readability for all e-readers and devices. Our goal is to produce eBooks that are user-friendly and accessible to everyone in a high-quality digital format.

A Brief Outline Airlife Pub Limited

Because of the important national defense contribution of large, non-fighter aircraft, rapidly increasing fuel costs and increasing dependence on imported oil have triggered significant interest in increased aircraft engine efficiency by the U.S. Air Force. To help address this need, the Air Force asked the National Research Council (NRC) to examine and assess technical options for improving engine efficiency of all large non-fighter aircraft under Air Force command. This report presents a review of current Air Force fuel consumption patterns; an analysis of previous programs designed to replace aircraft engines; an examination of

proposed engine modifications; an assessment of the potential impact of alternative fuels and engine science and technology programs, and an analysis of costs and funding requirements.

### **Pratt & Whitney's Dependable**

**Masterpiece** Haynes Publishing UK

Leaving no stone unturned, this book provides a detailed account of the inner workings of the R-4360.

Also covered is the engine's development history, variations, and its military, commercial, and racing applications.

### **Aircraft Piston Engines**

Specialty Press Aviation technology progressed at a blindingly fast pace during the first half of the 20th century. Aircraft were asked to fly higher, fly faster, carry heavier loads, take off and land on shorter runways, fly greater distances, and consume less fuel with each new generation, and with perfect dependability. Pratt & Whitney's R-1340, or Wasp as it was known in the commercial marketplace, was a relatively large engine, displacing 1,344 cubic inches. Somewhat akin to the steam age, when

triple-expansion engines the size of cathedrals ruled the waves, the R-4360 at one time represented the largest and most sophisticated of its breed. Nothing else in the late-1940s marketplace could boast what the R-4360 did: 3,000 to 4,000 horsepower. By the end of the piston-engine era, Pratt & Whitney had placed into mass production the largest and most powerful engine ever built in mass quantities. In addition to owning a Pratt & Whitney R-4360, Graham White is the author of several books including R-2800: Pratt & Whitney's Dependable Masterpiece and Allied Aircraft Piston Engines of World War II. White uses a large collection of data on the R-4360 gathered from the National Archives & Records Administration in College Park, Maryland. Leaving no stone unturned, this book provides a detailed account of the inner workings of the R-4360. Also covered is the engine's development history, variations, and its military, commercial, and racing applications.

**R-2800** Lulu.com  
"This English-language edition of Aeronautical

Research in Germany recounts and celebrates the considerable contributions made in Germany to the invention and ongoing development of aircraft. [snip] It covers in fascinating detail the milestones of the first 100 years of aeronautical research in Germany, within the broader context of the scientific, political, and industrial milieu."-- Publisher description.

### **History of the Aircraft Piston Engines**

Specialty Press/Pub & Wholesalers The Corsair was one of WWII's most superb fighters, achieving a victory ratio of nearly 11:1 in the Pacific. Had things worked out differently, its sister craft, Goodyear's F2G Super Corsair, might have eclipsed that record. Based on Goodyear's fixed-wing F1G design, the F2G had a bubble cockpit and was fitted with a Pratt & Whitney R-4360 engine. The twenty-eight cylinder, four row radial air-cooled monster provided nearly 50% more take-off power than the standard double Wasp. Yet by the close of WWII, only five F2G's had been built, and so the plane never saw combat. Originally printed by Goodyear and the U.S. Navy, this Flight Handbook taught pilots

everything they needed to know before entering the cockpit.

### **All Major Aircraft Power Plants, from the Wright Brothers to the Present Day**

National Academies Press Illuminates some of the historically significant developments in WWII aircraft engines that directly contributed to the execution and tactics of war, divided into sections on British and American manufacturers including Rolls-Royce, Bristol, Price and Whitney, and General Electric Turbosuperchargers

### **THE MILITARY REMAPPING OF INDUSTRIAL AMERICA**

National Academies Press This book provides a comprehensive basics-to-advanced course in an aero-thermal science vital to the design of engines for either type of craft. The text classifies engines powering aircraft and single/multi-stage rockets, and derives performance parameters for both from basic aerodynamics and thermodynamics laws. Each type of engine is analyzed for optimum performance goals, and mission-appropriate engines selection is explained. Fundamentals

of Aircraft and Rocket Propulsion provides information about and analyses of:

thermodynamic cycles of shaft engines (piston, turboprop, turboshaft and propfan); jet engines (pulsejet, pulse detonation engine, ramjet, scramjet, turbojet and turbofan); chemical and non-chemical rocket engines; conceptual design of modular rocket engines (combustor, nozzle and turbopumps); and conceptual design of different modules of aero-engines in their design and off-design state.

Aimed at graduate and final-year undergraduate students, this textbook provides a thorough grounding in the history and classification of both aircraft and rocket engines, important design features of all the engines detailed, and particular consideration of special aircraft such as unmanned aerial and short/vertical takeoff and landing aircraft. End-of-chapter exercises make this a valuable student resource, and the provision of a downloadable solutions manual will be of further benefit for course instructors.

*Not Much of an Engineer*  
Oxford University Press on

## Demand

"Pratt & Whitney engines helped to win World War II by powering much of the U.S. fighter fleet as well as many British planes. They also powered 98 percent of all transport planes used by the military during that war. Since then, they've powered such record-breaking aircraft as the Boeing B-50, the first airplane to fly nonstop around the globe, and the Air Force F-100 Super Sabre becoming the first aircraft to break the speed of sound in horizontal flight. In July 1976, Pratt & Whitney J58 engines powered an SR-71 spy plane to a world altitude record of 84,069 feet (25,624 kilometers) and a second Blackbird to a world speed record of 2,193 miles per hour (3,529 kilometers per hour). These dependable engines are also responsible for powering the first generation of commercial jet transports bringing the world to our front doors - the Boeing 707 and Douglas DC-8. Pratt & Whitney's JT8D, powering the Boeing 727 and 737, as well as the Douglas DC-9, has totaled more than half a billion hours of service with more than 350 operators since its

commercial service began. In fact, they've been used in most of the world's civil, commercial and military aircraft. Over the years, Pratt & Whitney has patented hundreds of innovations, from heat-resistant coatings to aerodynamic blades - technologies that make air travel more cost effective, comfortable and dependable. Today Pratt and Whitney engines provide power for everything from land based power stations, business jets and helicopters to large commercial aircraft, fifth generation fighters, and manned & unmanned space vehicles."The story of Pratt & Whitney" offers broad insight into the history of aviation itself and the people who built the industry."--Résumé de l'éditeur.

## **Powering the Luftwaffe** Amer Inst of Aeronautics &

"The frenzy of technological invention and improvement that accompanied each large-scale conflict during the twentieth century has been one of the most important factors in driving the spectacular scientific advances made during the last hundred years. The half-way point of the century saw the

horrors of the first truly global battle--World War II. At that time the piston aero engine was at its zenith and the world's airforces were almost entirely propeller driven. It is a period that provides the most interesting study of these engines and the aircraft they powered because the rapid change to turbojets that occurred in the post-war era saw the demise of the piston engine on almost all types of military aircraft and large airliners. This book looks at the design and development of the most famous engines used by the combatants during this great air war. Each type is studied and evaluated in historical perspective and many famous aircraft are illustrated to demonstrate installation and differing usage. One Merlin makes a Spitfire, two a Mosquito, and four a Lancaster. Engines made in America, Russia, and Germany could boast the same versatility and are described here in detail." -  
-Book jacket.

**History and Development of Frontline Aircraft Piston Engines Produced by Great Britain and the United States During World War II** ABC-CLIO

Stanley Hooker joined the Bristol Aeroplane Company in 1949 and tugged a rather reluctant company into the jet age, determined to give real

competition to Rolls-Royce. So successful was he that in 1966 Rolls-Royce decided the best thing to do was to spend

?63.6 million and buy its rival. By this time there was scarcely a single modern British aero-engine for which Hooker had not been responsible.

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