



Aircraft Engine
Historical Society



Program

**Eighth Annual AEHS Convention
Seattle, Washington
August 17 - 20, 2011**

Welcome to the Eighth Annual AEHS Convention!

The 2011 AEHS Convention focuses on engine developments that enabled noteworthy aircraft paradigm shifts. Larry Rinek, who has had a long association with and fascination of the B-52 will lead off the show. A tour of the Museum of Flight will include a presentation by Curator Mike Lavelle on the Boeing Model 40, one of the first non-military users of the Pratt & Whitney Wasp. A new feature for 2011 will be Thursday Movie Night, with movies about aircraft engines. Dixon Smith, whose work helped pioneer engine-building techniques now used in Unlimited Class air racers, will discuss the history of aircraft engines in racing boats and aircraft. Engine builder Mike Nixon will discuss V-12 racing engines, followed by a tour of renowned R-1820, R-1830, R-2000, R-2800, and R-3350 engine rebuilder Precision Engines LLC. Dan Whitney will relate his experiences with fitting newly manufactured, modern technology propellers to warbirds. Jack Connors will speak on the development of the P&W J57. Fred van der Horst will reveal history and development of the BMW 801.

SCHEDULE OF EVENTS

Wednesday August 17

1300 to 1700 Registration in the Holiday Inn lobby – A great opportunity to visit with other attendees.
1800 to 2200 Reception – Holiday Inn Everett Ballroom I. Light hors d'oeuvres plus a cash bar.

Thursday August 18 - Everett Ballroom I

0800 to 0900 Welcome and Introductions
0900 to 0930 Break
0930 to 1100 Presentation by Larry Rinek – Boeing's Formidable B-52 Stratofortress Bomber
1100 to 1200 Lunch program (lunch provided by the AEHS)
1200 to 1300 Travel to Museum of Flight
1300 to 1700 Group Photo, Tour of Museum of Flight. Presentations by Mike Lavelle on the Boeing Model 40 and by Kim McCutcheon on the Pratt & Whitney Wasp and Hornet
1700 to 1800 Return to Everett Holiday Inn
1800 to 2000 Dinner on your own
2000 to 2200 Movie Night – Featuring Movies about Aircraft Engines

Friday August 19 - Everett Ballroom I

0800 to 0930 Presentation by Dixon Smith – Merlin Modifications for Racing from 1960s to the Present
0930 to 1000 Break
1000 to 1130 Presentation by Mike Nixon – V-12 Racing Engines
1130 to 1230 Lunch Program (lunch provided by the AEHS)
1230 to 1500 Tour of Precision Engines
1500 to 1700 Tour of Museum of Flight Restoration and Storage Facility (near Precision Engines)
1900 to 2200 Banquet. After dinner speech by Clen Tomlinson – The history of D. Napier & Son; formation and activities of the Napier Power Heritage Trust

Saturday August 20 - Everett Ballroom I

0730 to 0845 Presentation by Dan Whitney – Modern Propellers for Warbirds
0845 to 0900 Break
0900 to 1030 Presentation by Jack Connors – The Engine for the B-52
1030 to 1045 Break
1045 to 1200 Presentation by Fred van der Horst – BMW 801 History and Development
1200 to 1230 Silent auction winners announced, 2012 Convention discussion, goodbyes.
1230 to 1700 Optional Tour of the Flying Heritage Collection
(Transportation and admission is the responsibility of individual attendees.)

Breaks will include coffee and soft drinks.

Presenters' Biographical Sketches

Larry Rinek is a Senior Technology Consultant, Technical Insights Division at Frost & Sullivan in Mountain View, California. He is a recognized aviation historian and frequent speaker with a number of aero publications to his credit. Larry was a USAF officer, a former student pilot (Piper J-3C Cub), a trained engineer, and veteran of the U.S. aerospace industry. He is an active member the AIAA and SAE technical societies, as well as the American Aviation Historical Society (AAHS), Wings of History (WOH), Society for Aviation History (SAH), and is a charter member of the Aircraft Engine Historical Society (AEHS). Larry also contributes to a number of aviation museums. He earned a BS in Industrial Engineering plus an MBA in Marketing, both from UCLA, and has over 35 years of business and technology consulting experience. In addition, Larry has been a guest lecturer in aero engineering (with a historical technical lessons-learned perspective), for three universities since 2000.

Dixon Smith began working on Merlins for Unlimited Hydroplane racing in 1961 while attending the University of Washington. He has been involved with Merlin modifications for boat and airplane racing almost continuously since then, both as an active mechanic and as a consultant. In addition to engine modifications Dixon has developed custom carburetor flows for Rolls-Royce Merlins and Griffons used in high-power racing applications. He also designed and manufactures an Anti-Detonation Injection regulator that has been successfully used on both Merlins and Griffons. Dixon spent six years in the U.S. Navy as an A6 Bombardier/Navigator and 25 years as a pilot for United Airlines, flying everything from Boeing 727s to Boeing 747s. After retiring from United Airlines, he went to work for the Boeing Co. in Production Flight Test. For entertainment, Dixon owns a restored 1965 vintage Unlimited Hydroplane powered by a R-R Merlin. He runs it several times a year in exhibition events.

Mike Nixon started part-time work for Volpar Aviation in 1969 and was full time by 1973, finishing the Lysander restoration. In 1974 Mike crewed his first Reno Air racer and moved to Dave Zuschel's Merlin shop, where he helped with the *Red Baron* Griffon-powered racer and built a number of Merlins for stock and racing aircraft. He started Mike Nixon Aviation at Chino in 1978; this later became Vintage V-12's. Mike was project manager for the building of *Dago Red* in 1982 and followed with *Strega* in 1983. Moved his shop to Tehachapi, California in 1987. During the 1990s Mike added the Bristol Centuarus radial engine and the Daimler Benz DB601 V-12 (Bf-109) to the list of projects. Started Vintage Carburetors, an FAA repair station, in 2003. Began the BMW 801 engine project in 2005 for the first FW-190A to fly in 60 years. Returned to the *Strega* race team in 2006, purchased Aircraft Cylinder engine shop (renamed Vintage Radials) in 2007 and moved it to Tehachapi. Vintage V-12's engines in *Strega* have won Reno in 2008, 2009 and 2010. Vintage V12's is currently restoring its 386th V-12. Vintage Radials is an FAA repair station for all Curtiss-Wright and Pratt & Whitney engines. Mike has been building Warbird engines for 38 years and involved in aviation for 42 years. Has A&P, repairman, chief inspector & accountable manager ratings with both FAA repair stations.

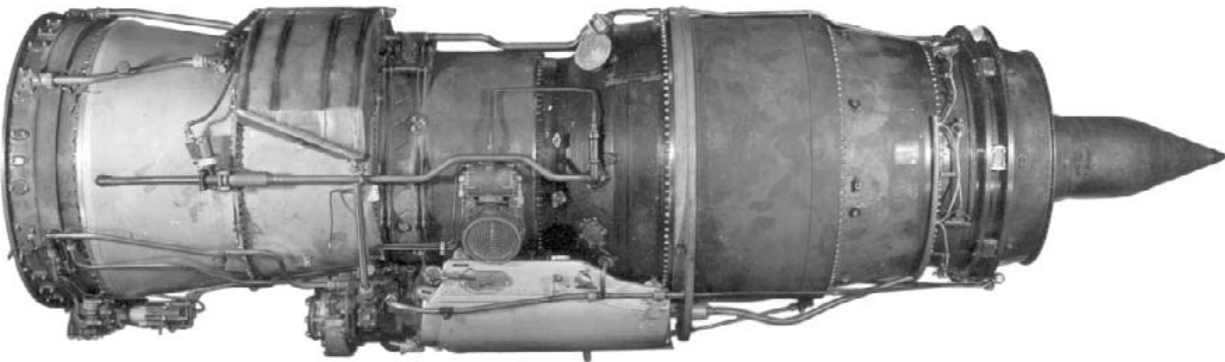
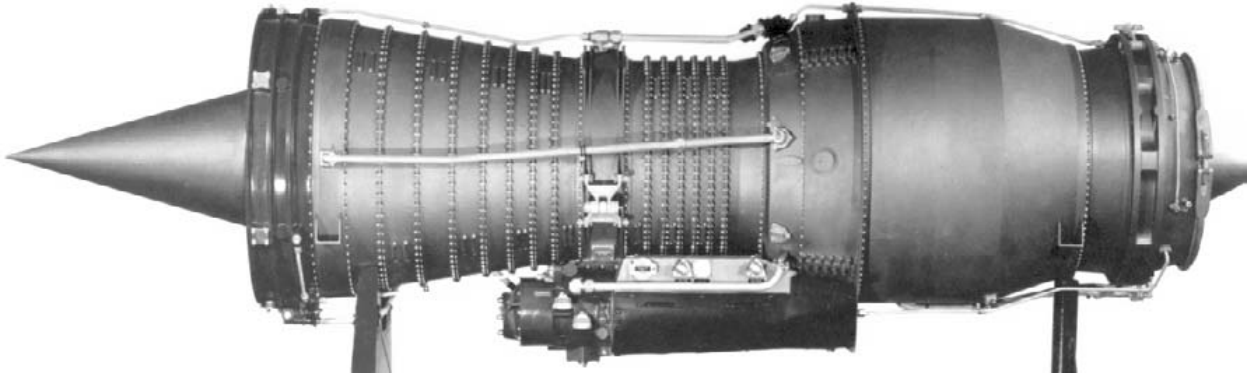
Clen Tomlinson started work in the motor vehicle trade and progressed through a wide variety of commercial, agricultural

and civil engineering equipment. During two years service in the RAF Clen spent fifteen months being trained as an aircraft instrument technician. With a change in direction in his late fifties Clen became involved in scientific engineering, specifically cryogenics and the manufacture of small turbine and free piston engines for liquid helium production. Until this point his experience had been very hands-on and practical. He then undertook the challenge of setting up an Engineering Craft and Technician Training Department for a medium sized manufacturing organisation with responsibilities for up to 100 trainees at a time spread over their five-year training period. This "people management" experience enabled Clen to expand his responsibilities into the Human Relations field and become the Group H.R. and Training Manager for some seven manufacturing companies, adding senior management experience to his curriculum vitae. Clen's final position before retirement was as Director of Engineering for an organisation supplying a wide variety of large resistive and superconducting magnets for medical treatment, particle and fusion physics experimental facilities throughout Europe and the USA. Clen is a Director of the Napier Power Heritage Trust.

Dan Whitney is a retired electric utility engineer with degrees in both mechanical and nuclear engineering. He served in the USAF during the Vietnam era as Chief of Maintenance for a wing of C-130s, and has had a lifetime interest in aircraft, and more specifically their engines. Dan developed an interest in the WWII era V-1710, which resulted in his 1998 publication of *Vee's For Victory! The Story of the Allison V-1710*. Over the past 15 years he has become quite involved in the Warbird movement, assisting owners and engine builders with technical support needed to keep these antique aircraft and engines flying. He has recently been involved in qualification of a new manufacture propeller for a unique Warbird, and will be reporting on this program at the AEHS Convention. Dan is a charter member of the AEHS, an AEHS Director, and has been a frequent contributor to *Torque Meter* and the AEHS web site. He lives in Sacramento, California with his wife where their son works as an Environmental Attorney.

Jack Connors, the "wild Irishman", joined Pratt & Whitney in 1948 after three years in of WWII Army Air Corps service, and graduation from Massachusetts Institute of Technology with a B.S. and M.S. in Mechanical Engineering. He retired in 1983 as Vice President of Advanced Engine Programs. Jack worked as a volunteer in the dormant P&W Archives subsequent to writing the engineering history of P&W. The American Institute of Aeronautics and Astronautics published his book *The Engines of Pratt & Whitney: A Technical History* in 2010.

Fred van der Horst was trained as a physician and ran a hospital in Tanzania for two years before becoming a radiologist in 1979. He specialized in breast cancer screening and retired in 2005. From age seven Fred had an interest in aviation, and later in the military history of WWII. He flew gliders in the 1990s and was trained to be a glider (maintenance) mechanic. It has become increasingly clear to him that availability of high performance engines was and still is a determining factor in the outcome of military conflicts. Questions that arose when building a 1:24 plastic model of the Fw-190 lead him to study the BMW 801. Most of the questions have been answered, but the model has not yet been finished. Fred resides with his wife in Hoevelaken, the Netherlands.



Evolution of the Pratt & Whitney J57