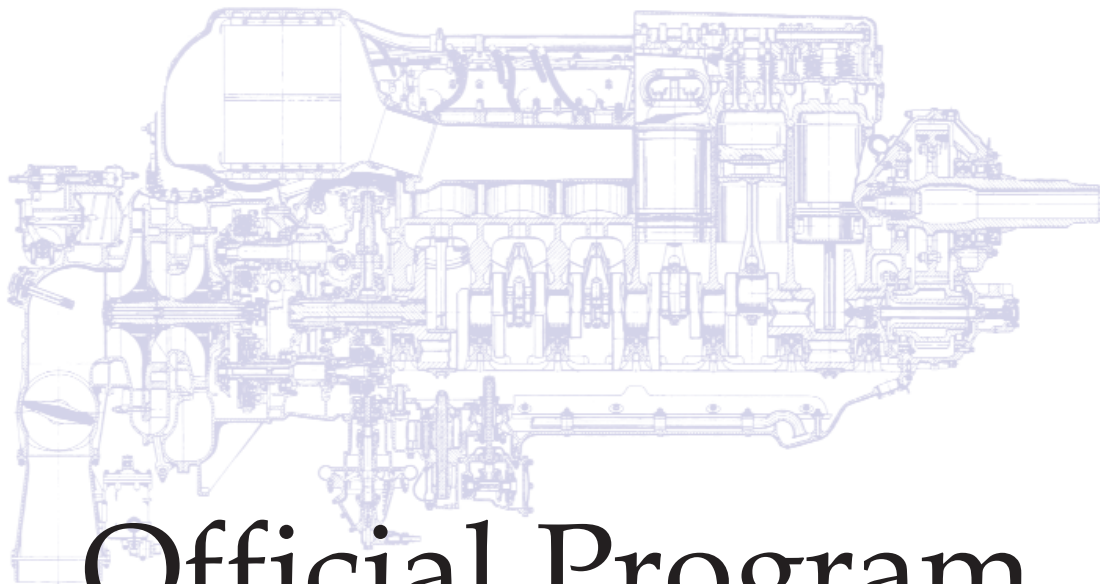




Aircraft Engine
Historical Society



Official Program
Fifth Annual AEHS Convention
Sacramento, California
July 9 - 12, 2008

Welcome!

The Fifth Annual Aircraft Engine Historical Society convention gives attendees a rare look into the world of Unlimited Class Air Racing. The Society is fortunate to have some of the world's most talented crew chiefs and engineers to provide behind-the-scenes technical details. We will also gain insight into rocket engine development at Aerojet and be treated to presentations on Rolls-Royce engines by one of the founders of the Rolls-Royce Heritage Trust.

Please enjoy the presentations, tours and the opportunity to visit with other engine enthusiasts.

Schedule of Events

Wednesday July 9

- 12 noon to 5:00pm Registration at the Lions Gate lobby. Visit with other conventioners.
6:00pm to 9:00pm Happy hour and socialize at General's Gardens.
Light hors d'oeuvres served plus a cash bar.

Thursday July 10

- 8:00am to 8:30am Introductions and announcements
8:30am to 8:45am Break
8:45am to 10:30am Panel discussion – Air racing personalities Dave Cornell, Bill Kerchenfaut, Pete Law, Brian Sanders and Dennis Sanders
10:30am to 11:00am Break
11:00am to 12 noon Presentation – Bill Hoffman: Aerojet Rocket Propulsion
12 noon to 1:30pm Lunch program (lunch provided by the AEHS) Presentation – Dave Birch: Differences Between Rolls-Royce and Packard-Built Merlins
1:30pm to 4:30pm California State Railroad Museum visit and tour
5:30pm to 6:15pm Meet at the Delta King bar – optional participation but highly recommended
6:30pm Dutch dinner at Joe's Crab Shack – optional participation but recommended

Friday July 11

- 8:00am to 8:45am Presentation – Dan Whitney: Modernizing Warbird Engines
8:45am to 9:00am Break
9:00am to 10:30am Presentation – Dave Birch: Rolls-Royce VSTOL Engines and Programs
10:30am to 11:00am Break
11:00am to 12 noon Presentation – Bill Kerchenfaut:
12 noon to 1:30pm Lunch program (lunch provided by the AEHS)
1:30pm to 5:00pm Aerospace Museum of California visit and tour. Engine demo runs at museum.
6:30pm to 9:00pm Banquet at museum. After dinner speaker – Dan Whitney: Photographing Racing Airplanes

Saturday July 12

- 8:00am to 8:45am Movie – *Contribution to Victory*
8:45am to 9:00am Break
9:00am to 10:00am Presentation – Dave Birch: Rolls-Royce Piston Aero-Engines
10:30am to 11:00am Break
11:00am to 12 noon Silent auction winners announced, suggestions, wrap-up and goodbyes.

Presenters' Biographical Sketches

Dave Birch has had a life-long interest in aviation. A few months after leaving school in 1954 began a trade apprenticeship with Rolls-Royce at its flight-test establishment at Hucknall. From 1963 he began writing on the history and achievements of Hucknall. He remained in his trade until 1979 and then transferred to Derby to work in the RB211 service department, taking early retirement to concentrate on researching and writing Company history. Dave was one of the founders of the Rolls-Royce Heritage Trust and since 1983 has edited its magazine *Archive*. For the Trust he has written two books – *Rolls-Royce and the Mustang*, and *Rolls-Royce Armaments*, and co-authored two others, *The Rolls-Royce Crecy* and *The Rolls-Royce Meteor*. Dave is currently working on a book about the Rolls-Royce Merlin.

Dave Cornell took over as crew chief of the very popular Unlimited Class racer *Rare Bear* in 2007. In addition, Dave has played a key role in the R-3350 powered Sea Fury *Critical Mass* campaign and designed the R-4360 powered *American Spirit*. Dave not only knows how to get the most out of a racing engine but also all of the complex systems and airframe issues needed for a safe and reliable aircraft.

Bill Hoffman recently retired from Aerojet General Corporation following a long career in advanced liquid-fueled rocketry. Aerojet has been a long-time fixture in the Sacramento area, where it designs and manufactures both solid and liquid fueled rockets. Bill was on the design team for the second stage Titan LR91 engine, a nearly 200,000 pound-thrust engine used for national defense and to lift many of NASA's key inter-planetary missions.

Bill Kerchenfaut is a mechanic at Hewlett-Packard's flight department in San Jose, California, and ordinarily works on GA airplanes and business jets. Kerch is also a legend with the Reno air racing scene, where his leadership of *Dago Red* and *Strega* teams produced Unlimited Gold seven years in a row. He tries to get his aircraft qualified in the top five on Monday, which avoids racing on Thursday and leaves four days to work on details. Kerch started racing in Hydroplanes before air racing was reintroduced in the 1960s. He also worked on *Miss Merced*, crewed on Greenamyer's Bearcat, and is currently the crew chief on the R-3350 powered racer *September Fury*.

Pete Law has enjoyed a distinguished career, primarily at Lockheed's famous "Skunk Works". Shortly after the 1964 Reno Unlimited Class air race Pete and fellow Skunk Works engineer Bruce Boland became involved in Daryl Greenamyer's Bearcat project, which quickly established itself as the world's fastest piston-engined aircraft. It was on this project that Pete cut his teeth on systems such as cooling, carburetors, water injection, ram recovery designs, etc. Pete has since become indispensable on the Reno ramp, helping racers with carburetion and engineering problems. Since the Greenamyer project, Pete has since played key roles in refinement of racing aircraft such as the *Red Baron RB-51*, *Super Corsair* and *Tsunami*, to name but a few.

The Sanders Brothers (Dennis and Brian) were among the original "Chino Kids", where in 1982 they became involved in air racing by building and campaigning a R-4360 powered Sea Fury, *Dreadnought*, under the watchful eye of their father, Frank Sanders. Sanders Aeronautics, founded by Frank in 1970, specializes in warbird maintenance, restoration and self-contained smoke generator systems. Sanders aviation has been involved in numerous Reno racers, including Sea Furys *Argonaut*, *September Fury*, and *September Pops*. The Sanders operate a complete aircraft maintenance and restoration facility in Ione, CA, about 25 miles from Sacramento, where they specialize in all things "Fury". They were the ones to perfect the installation of the R-3350 in the British Hawker Sea Fury.

Dan Whitney is a retired Professional Mechanical and Nuclear Engineer with a life-long interest in the Allison V-1710 engine. During the Viet Nam war he served in the USAF as a Chief of Aircraft Maintenance for a C-130 Wing. He then began a career in the electric utility industry, first responsible for the operation and engineering of a nuclear power plant and then for development of advanced gas turbines for power generation. His avocation remained aviation where he focused on the engineering basis for the V-1710. This led to writing the definitive *Vee's For Victory! The Story of the Allison V-1710*. Dan continues to write about and provide engineering support for the V-1710. He is the past president of the Aerospace Museum of California, located at Sacramento, and now works on restoring and presenting the museum's extensive engine collection.

