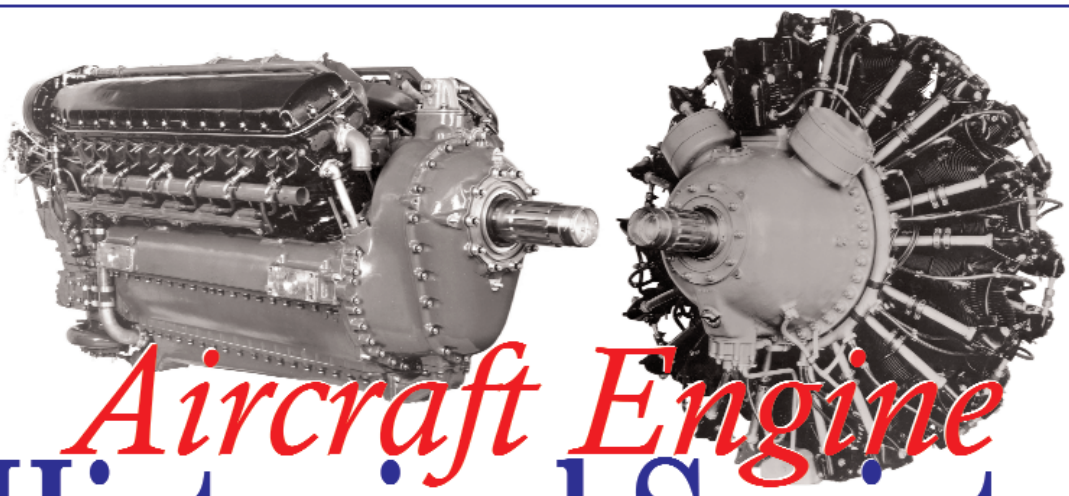


Aircraft Engine
Historical Society

Program

Ninth Annual AEHS Convention

Pensacola, Florida

May 9 - 12, 2012

Welcome to the Ninth Annual AEHS Convention!

The 2012 AEHS Convention focuses on the pioneers and pioneering technologies behind fundamental changes in aircraft propulsion. The 2012 Convention is fortunate to have TWO Teledyne Continental Motors former Chief Engineers: Les Waters and Bill Brogdon. Bill will discuss Diesel aircraft engines and Les will talk on the work of Sir Harry Ricardo. The 2012 Convention is also fortunate to have George Cully, a former USAF Air University Historian, who will relate the fascinating story of aircraft range extension. A guided tour of the of the National Naval Aviation Museum's Consolidated PB2Y and Hangar Bay 1 will reveal the behind-the-scenes activities at the Museum. Dan Whitney will provide insight into the history of speed-density fuel controls. Dave Birch will describe the Rolls-Royce Merlin Power Plant, a standardized quick-change engine package. Tom Fey will present an overview of contra-rotating propellers and the aircraft they powered. Fred van der Horst will portray the ATAR series of engines, a continuous development of the BMW 003.

SCHEDULE OF EVENTS

Wednesday May 9

1300 to 1700 Registration in the Pensacola Grand Hotel Ballroom — A great opportunity to visit with other attendees.
1800 to 2200 Reception — Pensacola Grand Hotel Ballroom. Light hors d'oeuvres plus a cash bar.

Thursday May 10 - Pensacola Grand Hotel Ballroom

0730 to 0830 Welcome and Introductions
0830 to 0900 Break
0900 to 1030 Presentation by Bill Brogdon — Diesel Aviation Engines
1030 to 1200 Presentation by Les Waters — Harry Ricardo and Some of His Contributions
1200 to 1300 Lunch Program (lunch provided by the AEHS)
1300 to 1330 Travel to National Naval Aviation Museum
1330 to 1700 Group Photo, Tour of Consolidated PB2Y and Hangar Bay 1
1700 to 1730 Return to Pensacola Grand Hotel
1730 to 1930 Dinner on your own
1930 to 2200 Movie Night — Featuring Movies about Aircraft Engines

Friday May 11 - Pensacola Grand Hotel Ballroom

0800 to 0930 Presentation by Dan Whitney — Speed-Density Fuel Controls
0930 to 1000 Break
1000 to 1130 Presentation by Dave Birch — The Rolls-Royce Merlin Power Plant
1130 to 1230 Lunch Program (lunch provided by the AEHS)
1230 to 1400 Presentation by Tom Fey — Contra-Rotating Propellers
1400 to 1430 Break
1430 to 1600 Presentation by Fred van der Horst — SNECMA ATAR Engines
1600 to 1700 Silent auction winners announced, 2013 Convention discussion.
1900 to 2200 Banquet. After dinner presentation by George Cully — The Range Extension Problem, 1939 - 1959

Saturday May 12

0830 to 0900 Travel to National Naval Aviation Museum
0900 until Visit National Naval Aviation Museum

Breaks will include coffee and soft drinks.

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 has two more books ready for publication — *Rolls-Royce and the Halifax* and *Hucknall, the Rolls-Royce Flight Test Establishment*, and is currently working on a book about the Rolls-Royce Merlin.

Bill Brogdon has over 40 years of engine engineering experience and is a now a consulting engineer to a variety of clients. As a Design Engineer, Design Manager and Chief Engineer at Teledyne Continental Motors, Bill was involved in numerous piston engine developments including the NASA GAP Diesel, record-setting around-the-world *Voyager* engines, TCM's gas turbine, Boeing Condor high altitude engines and turbochargers, and the lightweight O200D engine for the Cessna Skycatcher. As a Design Manager and Chief Program Engineer at Ricardo, Inc., Bill directed design projects, design studies and failure investigations across a full range of engine sizes and types. As a Design Engineer at International Harvester Bill did design work on all major engine components with an emphasis on valve gear, cams, cylinder heads and exhaust manifolds. Bill holds 17 patents and is an instrument-rated private pilot.

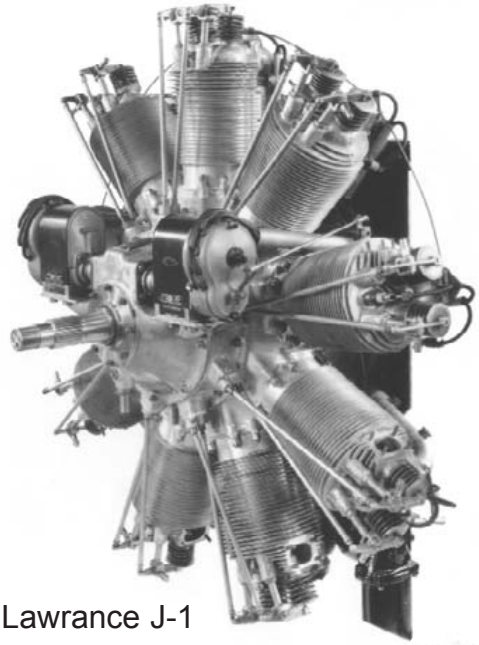
George Cully was director of the Office of History at Air University, Maxwell AFB, Alabama prior to his retirement from Federal Civil Service in late 2010. After joining the USAF History and Museums Program in 1984, he served in assignments at multiple levels, including USAF Headquarters, Air Force Materiel Command Headquarters, the Air Force Research Laboratory and the Air Force Historical Research Agency. Co-author of *Handbook for Researching Missing-in-Action Cases, 1941-1960* (1994), *Active Air Force Wings as of 1 October 1995* (1998), and *USAF Active Flying, Space, and Missile Squadrons as of 1 October 1995* (1998), he has also written for *Air Force Magazine*, *Air Power Journal*, and *Air Power History*. George retired from active duty in 1991 after having served in both the USAF and the US Navy; he received a Juris Doctorate from the University of Virginia in 1979. George and his wife Margaret presently reside in Montgomery, Alabama.

Tom Fey is research pharmacologist (drug hunter) from the suburbs of Chicago who has a life-long interest in engines and the automobiles, motorcycles, boats, trains, and aircraft they power. The great piston era of the 1940s and '50s and Unlimited class air racing are of particular interest. The first glimpse of the contra-rotating propellers on the RB-51 world speed record holder began an unnatural fascination with propeller technology. Tom has written articles for air racing newsletters, prototyped and published several electric radio controlled aircraft designs, contributed to *Torque Meter*, and gave a talk on propeller design at the 2005 AEHS convention. With two kids now out of college, a patient wife, and a dog named Doolittle, he has a bit more time for restoring engines and propellers, touring on bicycle, researching obscure topics to figure out how things work, and unleashing those findings upon the AEHS membership.

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, which led to the BMW 003, which led to the SNECMA ATAR engines. Fred resides with his wife in Hoevelaken, the Netherlands.

Les Waters worked as draftsman in two engine companies after a manufacturing apprenticeship. This was followed by four years research at Shell in diesel fuels. He then returned to engines as Chief Designer for a producer of small industrial diesels. After supervising engine applications for Cummins UK he moved to Cummins USA. Les joined Continental Aviation, Detroit in development of tank engines. He was Chief Engineer at a producer of large engine compressors and diesels up to 6,000 HP. From 1975-82 Les was VP Engineering Teledyne Continental Aviation. He acted as representative in the U.S.A. for Ricardo from 1984 until 1997, and is now retired.

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. 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.



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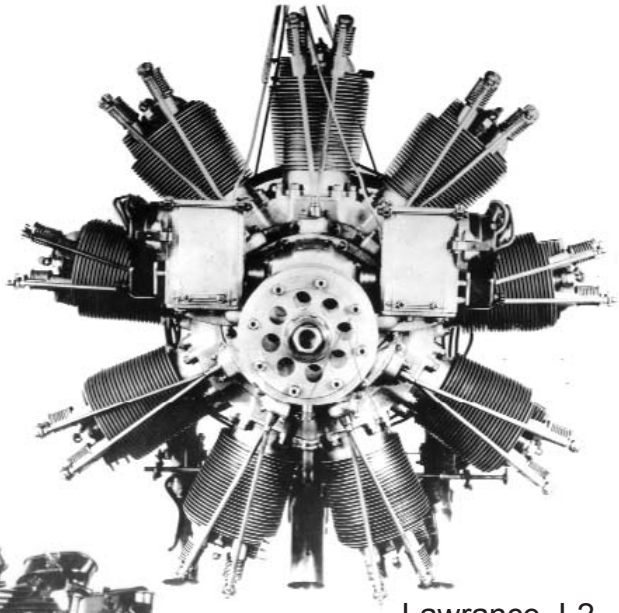

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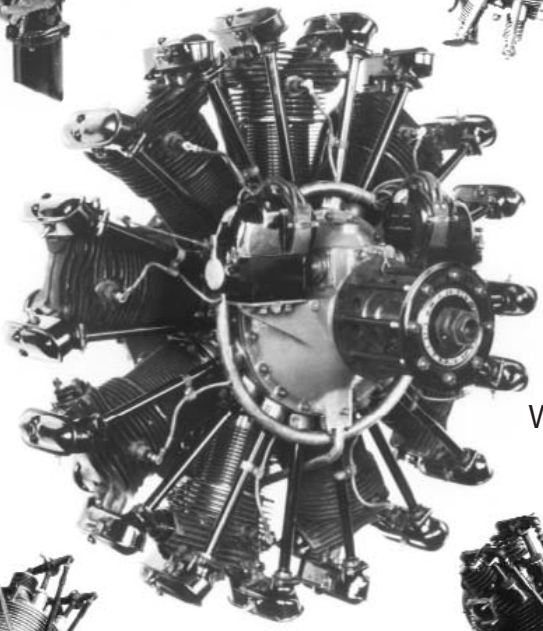

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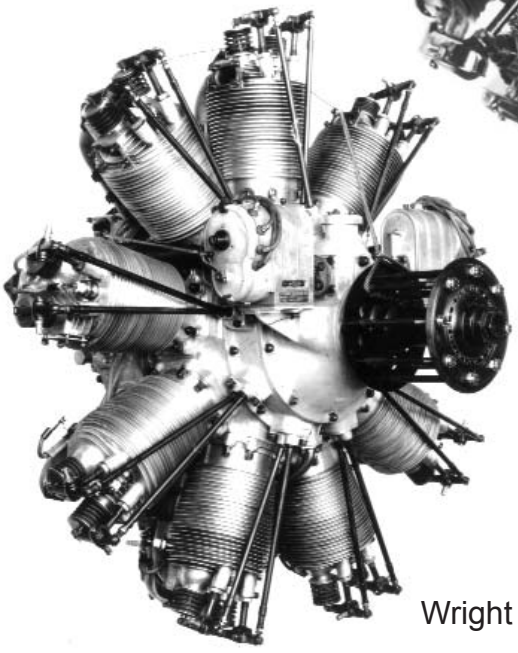

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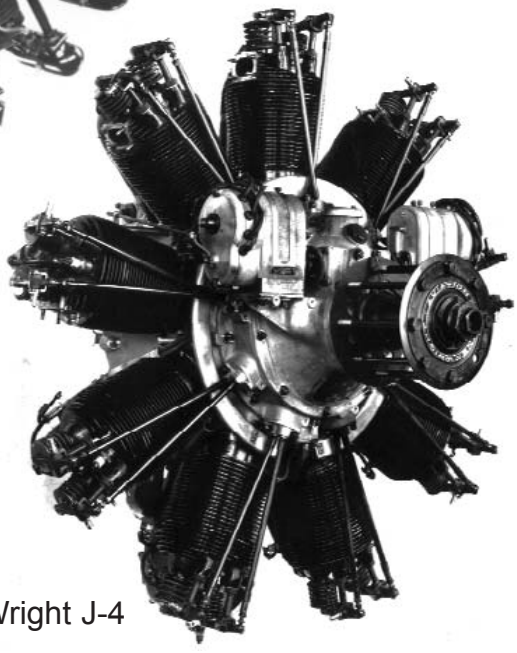

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U.S. Navy Policy Helped Evolve the American Air-Cooled Radial