

Program
Tenth Annual AEHS Convention
Nottingham, England
October 8 - 11, 2013

A detailed technical cutaway drawing of an aircraft engine is shown in the background, rendered in a light blue, semi-transparent style. It shows the internal components of the engine, including the pistons, valves, and the crankshaft.

Welcome to the Tenth Annual AEHS Convention!

The AEHS 2013 Convention is a brilliant opportunity to visit the Rolls-Royce Heritage Trust Collection, which in addition to aero-engines, houses many other artifacts, such as engine parts, cars, diesel engines, rocket engines, measuring equipment, trophies, and model aircraft. Also included are tours of the Imperial War Museum collection at Duxford (aircraft, engines, armoured fighting vehicles) and Royal Air Force Museum Cosford. Timed to coincide with the 2013 Duxford Autumn Air Show, the AEHS Convention will end in time for those interested to attend the Duxford show on their own. In addition to all-day visits at these world-class museums, Convention attendees will be treated to a presentation by Pete Law on the Pratt & Whitney J58 before a regular meeting of the Rolls-Royce Heritage Trust Derby and Hucknall Branch, and a Friday after-dinner presentation by retired Rolls-Royce performance/chief engineer Professor Alec Collins.

SCHEDULE OF EVENTS

Tuesday, 8 October (Nottingham Arrival day)

1800 to 2200 Reception with light hors d'oeuvres plus a cash bar.
Introduction, announcements, event/schedule overview, registration packet distribution.

Wednesday, 9 October - Session Registrants aboard 53-Seater Coach

0900 Coach departs Crowne Plaza Nottingham for Rolls-Royce Derby.
1000 to 1100 Tour the Trent engine build-line and the latest testbed.
1100 to 1200 To nearby Learning and Development Centre to view smaller collection of historic/new engines.
1200 to 1300 Buffet lunch at LDC - included in session registration fee.
1300 to 1700 Tour of R-RHT collection, with chance to meet historical/technical experts.
1700 to 1710 Coach travels from Rolls-Royce to nearby Derby Conference Centre.
1800 to 1930 R-RHT program. Presentation by Pete Law on the Pratt & Whitney J58.
Brief presentation on the AEHS and what it does.
2000 to 2030 Coach returns to the Crowne Plaza Nottingham.

Wednesday, 9 October - Guest Registrants aboard 29-Seater Coach

0900 Coach departs Crowne Plaza, Nottingham for Royal Crown Derby porcelain works and Chatsworth House.
circa 1700 Coach departs Chatsworth for return to Crowne Plaza, Nottingham.

Thursday, 10 October - Session Registrants aboard 53-Seater Coach

0800 Coach departs Crowne Plaza Nottingham for Duxford.
1000 to 1700 Tour the Duxford collection, American Museum, and behind-the-scenes restoration facilities.
Admission included in session registration fee. Lunch on your own (at Duxford cafeteria).
1730 to 1930 Coach returns to Crowne Plaza Nottingham.

Thursday, 10 October - Guest Registrants aboard 29-Seater Coach

0800 Coach departs Crowne Plaza, Nottingham for sights in and around Oxford, with a possible comfort stop on way.
1800 Coach returns to Crowne Plaza, Nottingham with possible comfort stop on way.
May return earlier if tours are complete.

Friday, 11 October - Session Registrants aboard 53-Seater Coach

0830 Coach departs Crowne Plaza Nottingham for RAF Museum Cosford.
1000 to 1500 Tour RAF Museum Cosford. Lunch on your own.
1500 Coach returns to Crowne Plaza Nottingham.
1900 to 2200 AEHS Banquet with retired Rolls-Royce performance/chief engineer Professor Alec Collins, who will speak about his time in America on various projects.

NOTE: Friday has been reserved Guest registrants to explore Nottingham, with its huge variety of sights and shopping venues. No coach will be available to wives/guests on Friday.

Presenters' Biographical Sketches

Professor Alec Collins began his career with Rolls-Royce in 1954, where he developed a novel method for calculating off-design performance of mixed bypass engines. This facilitated optimisation studies and new engine concepts, including the Medway, Spey (both civil and military), RB172 and Adour.

From 1962 to 1964 he worked on full-scale, half-aircraft testing of four RB162 engines mounted inside a 27-foot diameter wind tunnel in Modane, France. This was part of Mirage IIIV/RB162 installation development. From 1964 to 1967, he served as Senior R-R Engineer Phantom Spey, McDonnell, St. Louis, USA during installation of the reheated Spey in the Phantom and flight testing at Edwards AFB. From 1967 to 1972, as Chief Engineer Adour, Derby, he developed and certified the reheated Adour engine in the SEPECAT Jaguar, and initiated the definition and installation of the Adour in the BAE Hawk. This included invention of the Adour Part Throttle Reheat system.

As Programme Manager of the RB211 and later Chief Engineer RB211-524 Growth, he was responsible for co-ordinating and advancing all RB211 activities for its first four years in service. He then formulated RB211-524 engine growth concepts, and the necessary research and development programmes. This work ultimately enabled the 535E4.

From 1984 to 1987, he was VP Engineering IAE-V2500, Derby & East Hartford, USA, responsible for overall management of the engineering work of the seven companies (from five countries) involved in the V2500 engine development, certification and installation into the Airbus A320. He went on to serve as General Manager Performance, all

R-R Divisions from 1987 until 1992, where he was responsible for performance teams across all Rolls-Royce divisions. He organised recovery of 524G performance in Boeing 747-400, managed EJ200 performance development, WR21 concept studies and initial performance work, and selection of cycles for Trent 700, 800 and future derivatives. This post also included responsibility for aircraft performance analysis groups, both civil and military.

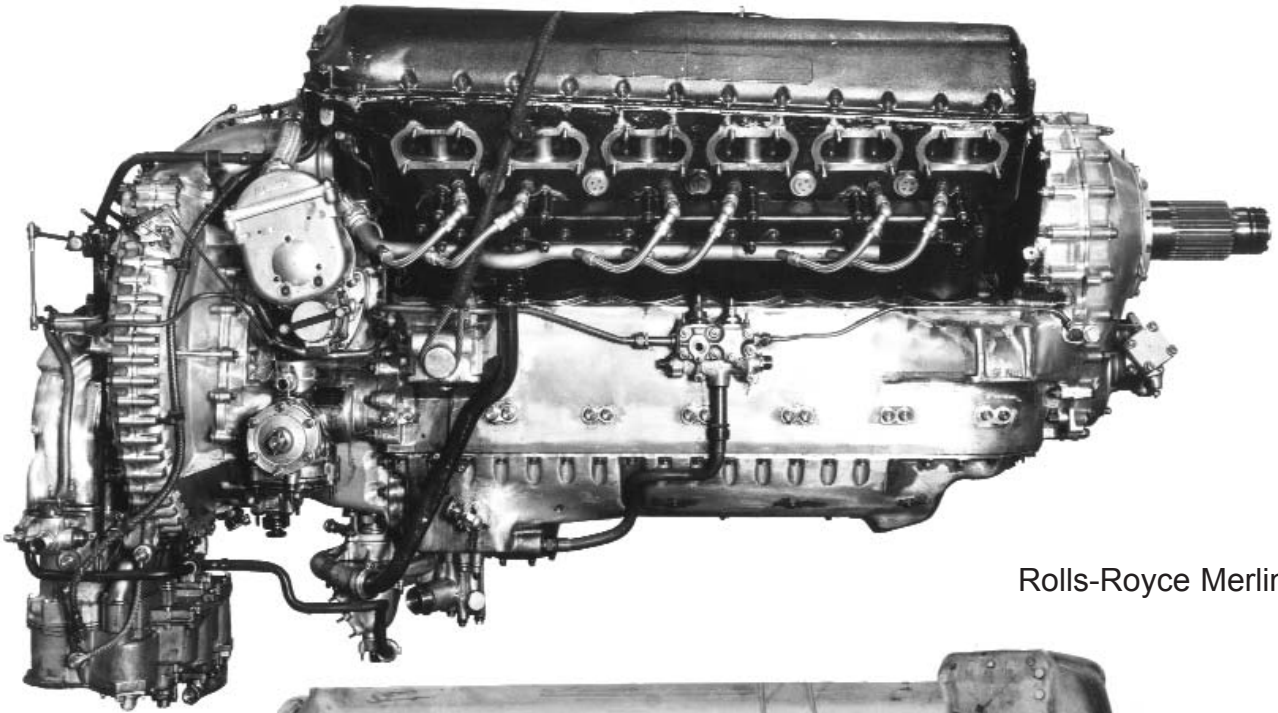
From 1992 to 1994, as Chief Engineering Auditor, Performance & Controls, Professor Collins was part of small team reviewing all Rolls-Royce projects including civil, military, power generation, marine, etc., later serving as performance and controls Consultant Engineer and Acting Chief Engineer Trent 700.

From 1995 through 2007, he was Visiting Professor of Aviation Gas Turbines, University of Pisa, Italy. There he lectured each year on the conceptual design of a modern civil gas turbine engine - in this case the Trent 800. He received the University's Gold Medal in 2005.

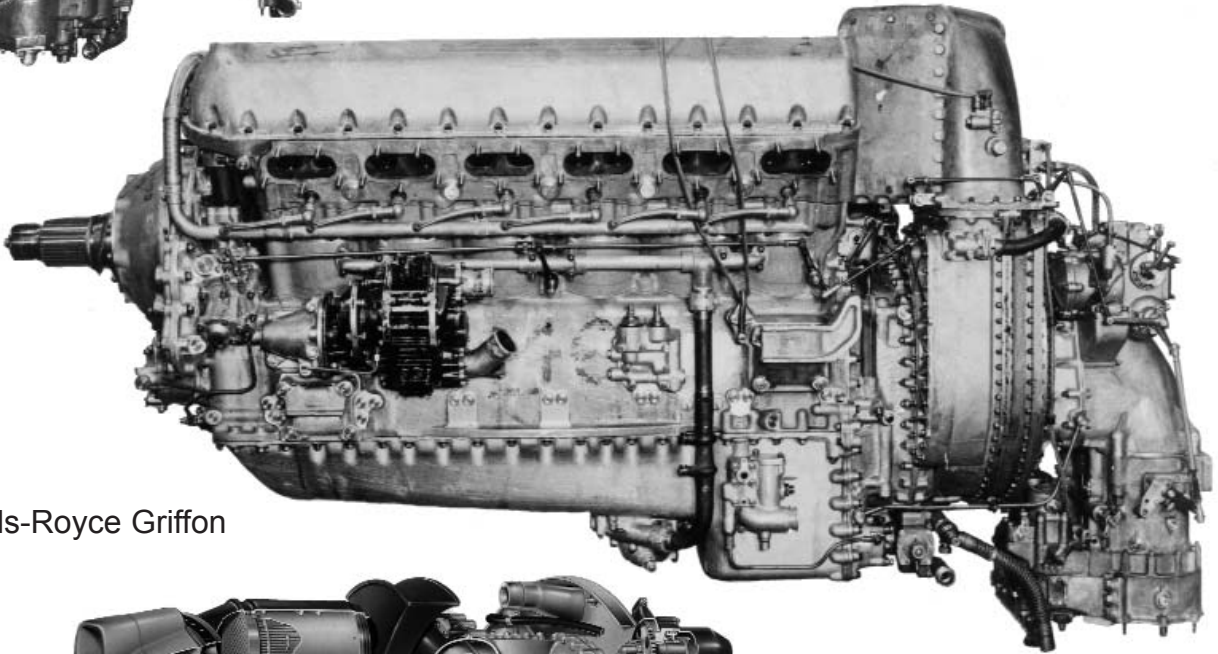
Professor Collins holds a Bachelor in Engineering, is a Chartered Engineer, a Fellow of the Royal Aeronautical Society, and a Fellow of the Institution of Mechanical Engineers.

Pete Law's distinguished career began at Lockheed in January, 1959 as a thermodynamics engineer. He transferred to Lockheed's famous Skunk Works in 1961, where he did internal and external heat transfer, structural thermal analysis, cooling system design, and internal subsystem (fuel, hydraulic, etc.) thermal analysis. During his 40-year career at Lockheed, Pete worked on the F-104, U-2, A-12, YF-12A, SR-71, M-21, D-21, F-117A, F-22, and JSF(X-35), among others. He managed the Thermodynamics Department from 1980. He continues to serve as a consultant to several top U.S. aerospace companies.

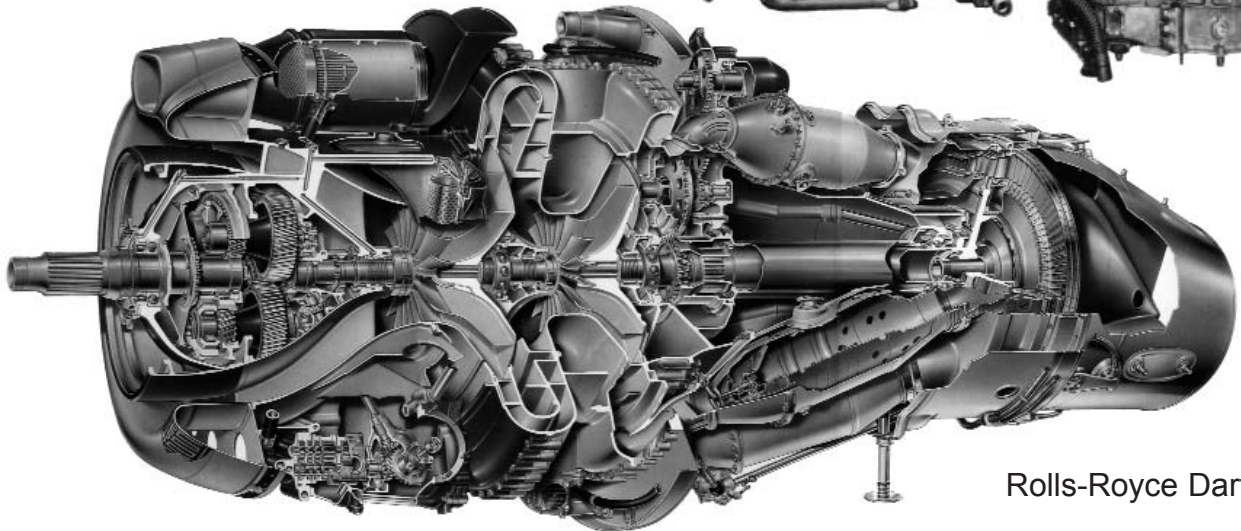
Pete became involved with Unlimited Class air racing in 1964, when he and fellow Skunk Works engineer Bruce Boland teamed up with Lockheed A-12 and SR-71 test pilot Darryl Greenamyer to work on Darryl's record-breaking Grumman F8F Bearcat project. He and Bruce introduced numerous innovations to increase engine power and reduce cooling drag. On 16 August 1969, Greenamyer broke the 30-year old FAI Class C-1 Group I 3 km speed record with a speed of 483.041 mph. Pete has helped numerous other racers with engineering, carburetion flow checks, and carburetion adjustments. On 17 September 2011, He was awarded Lifetime Achievement Award #1 by the Unlimited Division for his many contributions to air racing since 1965.



Rolls-Royce Merlin



Rolls-Royce Griffon



Rolls-Royce Dart