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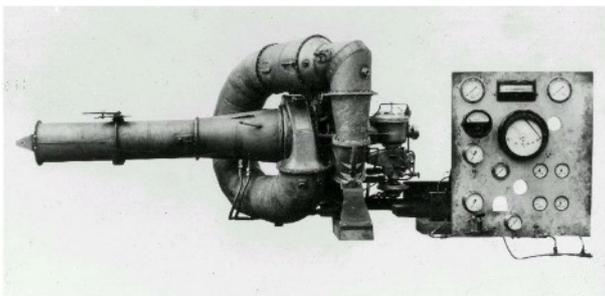
Contrails

Newsletter of the Christchurch Aviation Society

CAvSoc

Sir Frank Whittle and the Jet Engine

Our post AGM talk was by committee member Stephen Robson. Whittle was born 01 June 1907 and a picture shows him with a toy aircraft at age 4 and by the age of 10 he was earning pocket money at his father's factory which was making exhaust valves for aero engines. His early ambitions to better himself and to fly saw him join the RAF (at the third attempt) and enter the harsh life at RAF Cranwell under Trenchard's Apprentice scheme. His ability and drive resulted in a sixth place after the 3 year course but only the top 5 were destined to go on to become pilots. Fortunately one of the those failed the medical and now Whittle had achieved his aims and he tackled the 2 year course and excelled as a pilot. His final term thesis was titled 'Future Developments in Aircraft Design' which suggested flight of 500mph at 40,000ft, both double the prevailing capabilities. He also identified the need for a new form of propulsion but at that time the idea of a 'jet' engine was to use a piston engine to drive a fan with supplementary burning and exhausted via a nozzle and, unbeknownst to Whittle, patented in 1917. After two years as a fighter pilot on 111 Sqn he progressed to the Central Flying School to train as an instructor and whilst there he had his 'light bulb' moment which was to connect a turbine in the gas stream to drive the compressor to provide the air. With the help of an RAF friend Whittle lodged a patent in 1930 after the Air Ministry (AM) had shown no interest. A tour at Felixstowe followed, which was home to the Marine Experimental Establishment where he tested catapult launches and also was instructed to 'ditch' an aircraft in the sea to find out how it behaved. His next tour was the engineering course at Henlow where Whittle's abilities earned him a place at Cambridge in 1934 to study the Mechanical Science Tripos. With encouragement from former RAF friends. Power Jets Ltd was set up in January 1936 with a four party agreement - the AM as they paid Whittles salary, Whittle himself, his two RAF friends and



Test Assembly of First Model Experimental engine.

Meetings - at Druitt Hall commencing 8pm

Wed 06 Sep - Air New Zealand DC-10 crash in Antarctica by Dr James Mason

Wed 01 Nov -

investment bankers OT Falk & Partners (Falk was the father of Roly Falk the famous Vulcan test pilot). The effort of bringing together all the resources and technical abilities, combined with the exam stresses had a bad affect on Whittles health. Power Jets was set up at the British Thomson-Houston site at Rugby and BTH was chosen as the main sub contractor to build the engine being a prominent steam turbine company. Despite many problems Whittle ran his first engine on 12 April 1937 (80 years ago) but the noise and fumes meant that he was moved to a disused foundry at Lutterworth. Despite the general disinterest of the AM, the Director of Scientific Research visited in 1939 and saw the engine run for 20 minutes following which government support started. Problems with the combustion were solved by Lubbock and Shell and it remained only to solve the problems of materials that could cope with the searing heat at the turbine. While the government helped with finance it also started giving contracts direct to Rover and BTH and Whittle felt he was losing control. The first flight of his engine was the 15 May 1941, but by this time the relationship with BTH was strained through technical disputes and also with Rover which had secretly worked on an improved engine concept that Whittle had already devised but not developed due to lack of resources. Rolls-Royce, which had been helping Whittle with engineering problems, now came in by offering their tank engine factory in exchange for Rover's jet engine operation. Whittle worked well with Stanley Hooker of RR who understood compressors and very quickly the engine for a fighter (the Meteor) was produced. The government now stepped in to nationalise jet engine development and by 1946 Whittle had left Power jets R&D and the RAF with a medical discharge in 1948. For his efforts and investment in Power jets he was knighted and also received £100,000.

Pictures courtesy of Lutterworth museum



10th Bournemouth Air Show Thu 31 Aug to 03 Sep 2017

Whats on and when is shown in the programme (£8 from newspapers) which also has a code for accessing the air show web site to find the latest info. Attractions include, Red Arrows (but not Sunday), Strikemaster, Mig15, Vampires, Blenheim, Mustang, Yaks, BBMF, Great War Display Team and evening shows Otto the helicopter, Twisters, Red Devils parachute team.

Friends of the New Forest Airfields open days on 17 Sep (10 - 4) and 15 Oct at their refurbished museum off Derrett Lane, Sopley, via the new housing estate BH23 8EB, and turn first left on entering the estate. Web: fonfasite.wordpress.com