

# MERLIN FINDS A NEW HOME

Last year Cotesbach became home to a Rolls-Royce Merlin 724-1C engine, which was fired up successfully for the first time on 8<sup>th</sup> March 2009.

The Merlin is a liquid cooled 27 litre V12 piston aircraft engine with supercharger, designed and developed as a private venture by Rolls Royce (PV 12), first flown in 1935 and fitted to the Spitfires of Battle of Britain fame (designed by R.J. Mitchell) which were pivotal in the victory of World War II.

The Merlin enabled aircraft to fly at least 100mph faster than before, reaching speeds of 450mph and greatly improving performance at high altitude.



Widely considered to be among the most successful engines produced during World War II, Merlin engines were also used in, among other aircraft, Hurricanes, Wellingtons, Defiants, Lancasters, Halifaxes, Mustangs and Mosquitos.

This engine was one of four fitted to a Canadair Douglas DC4 Argonaut civilian plane of the 1950s, each 1800hp (this one is labelled 'Right Wing Outer').

It was acquired and lovingly restored by Tom Newton's cousin, Francis Machin, architect and son of the sculptor Arnold

Machin who produced the iconic image of The Queen's head we know so well from the Royal Mail stamp. His mother, Patricia Newton, was an artist.

The engine was kept at Francis' home, Garmelow Manor, Staffordshire, but since his early death in 2007 resulted in the sale of that property, Tom has been appointed 'Guardian of the Merlin' until Francis' children can accommodate it, as it is hoped to keep the engine in the family.

We are proud that this crucial piece of aviation history can make its home so close to two others : Stanford Hall where Percy Pilcher broke the world distance record in 1897 leaving the ground in his 'Hawk' for 250 metres, and Lutterworth, where initial testing of the jet engine by Frank Whittle took place, which superceded the Merlin design at the end of World War II.



# THE VITAL SPARK

On 30<sup>th</sup> September 1941 a patent was registered by Fred Newton (Tom's grandfather and Francis's great uncle) of Newton Brothers, Derby, for a Carbon Pile Voltage Regulator.

Fred Newton was managing director of the family engineering firm which was set up in 1899 and operated from their premises in Alfreton Road which in 1948 was described as a firm 'fully occupied making the equipment so urgently needed by the country's power and industrial undertakings'...Newton Bros had close links with Rolls Royce in the same city, and in time the regulator was fitted to all Merlin engines, enabling them to fly successfully at higher altitudes and thus giving them a strategic advantage over the opposition.

To quote a news item from 1945:

“ A new type of voltage regulator invented by Mr Frederick Newton, and manufactured by Messrs Newton Brothers (Derby) Ltd, has, during the past four years formed an essential and integral part of almost every aeroplane, warship, radar and gunsight installation.”



Some 40,000 regulators were being produced monthly in the later months of the war, and Mr Newton was flown to the U.S.A. in 1941 for the purpose of assisting the production of the regulators there. “The magnitude of the application of this one patent, and the essential quality for nearly all of the

electrical equipment, afford striking tribute to the brilliant skill of Mr Frederick Newton” commented Colonel Cooper-Parry, Chairman of Newton Brothers.

Although his invention never attracted national recognition, rest assured that here in Cotesbach the Merlin will continue to celebrate his achievements, as it does every pilot and technical hand involved with this colossus of British engineering.

*As the engine needs to be fired up at regular intervals, you are invited to join in the experience at the Stable Yard, Cotesbach, on any of the following Saturdays at 11.45am for 12 noon:*

**1<sup>st</sup> May, 5<sup>th</sup> June, 3<sup>rd</sup> July 2010**

Directions: follow signs to the shop  
[www.NaturallyGoodFood.co.uk](http://www.NaturallyGoodFood.co.uk) LE17 4HX  
or call 01455 552697 for information or check our website on [www.cotesbach.net](http://www.cotesbach.net) for updates after July

We are very grateful to Hammonds of Lutterworth for their advice and technical assistance.



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