

THE WHIRLWIND BECALMED

The brainchild of Westland's *enfant terrible* design genius W.E.W. Petter, the Whirlwind promised scorching performance and agility matching that of its rival, the Spitfire. The well-worn legend is that its troublesome Rolls-Royce Peregrine engines fatally compromised its sparkling combat potential. MATT BEARMAN offers compelling evidence that the blame for its shortcomings lies elsewhere . . .

WHIRLWIND P7110 / PHILIP JARRETT COLLECTION



The second prototype Whirlwind, L6845, was tested with propellers of a one-off Rotol design, as seen fitted here. The first prototype, L6844, had been fitted with "handed" Peregrines driving de Havilland propellers, but the props of L6845 rotated in the same direction, the two aircraft sharing broadly similar handling characteristics.



PHILIP JARRETT COLLECTION

UNCONVENTIONALLY pretty, the Westland Whirlwind has always attracted controversy. For some it was a world-beater that was unfairly cancelled in its prime, while others see it as a lame duck that should never have left the drawing board. One thing that both sides agree on is that it was let down by its engines, an apparent rare mistake by Rolls-Royce called the Peregrine. There is compelling evidence, however, to suggest that the blame lay somewhere else entirely.

The first person to cite poor engine performance in writing was perhaps the Whirlwind's own "famously difficult" designer, William Edward Willoughby "Teddy" Petter. In November 1940 he came back to Yeovil from a visit to No 263 Sqn, then working-up on the radical new fighter in Scotland, claiming to have discovered that, unlike the prototype, his creation was suffering from a fall-off in supercharger boost with altitude at "twice the rate anticipated".¹ Conveniently ignoring how unlikely this was in his efforts to absolve his design from blame for its failings, he painted a picture of an aircraft that progressively became slower and more useless at anything above a full-throttle height ² of 15,800ft (4,820m), thanks entirely to the "third-party" engines.

A POTENTIAL GAME-CHANGER

This seemed a great pity. Down low nothing could catch a Whirlwind. It was manoeuvrable, practically viceless and rapidly becoming beloved by its pilots. It certainly should have been a game-changer. As a weapon of war it was formidably potent, with four 20mm cannons packed close together in the nose. Aimed by looking straight down the barrels, these could take out a tank at a time when nothing else flying could.

The Whirlwind was also innovative; it had a bubble canopy, intakes in the leading edges, slats and Fowler flaps. It had a slab-sided fuselage over the wing, which almost nobody noted at the time (or since) was the ultimate solution to high-speed

interference drag. [More on this in a forthcoming feature from the author — Ed.] So how could Rolls-Royce allow it to be pole-axed so disastrously? The probable answer is that it didn't.

Back in July 1940 the RAF's acceptance testing team at Martlesham Heath had given the aircraft a clean bill of health and a ceiling of 31,000ft (9,450m).³ However, as the first trickle of Whirlwinds began to arrive with Nos 25 and 263 Sqn in 1940, Service pilots began to ask why the altitude performance wasn't what it should have been, or even what it was when tested. The question escalated to the Chief Technical Officer of Fighter Command, Gp Capt Beardsworth, who evidently telephoned E.J. Jones, Chief Technical Officer at the Aeroplane & Armament Experimental Establishment (A&AEE) at Martlesham Heath, on October 25, 1940, asking him, in the light of the poor altitude performance, what was different between production machines and the prototype tested there, L6845.¹

Although the telephone call wasn't logged, the written reply is very telling:

"Whirlwind; In reply to your telephone query of today, the following information is available. (1) Our trials were conducted at an all-up weight of 10,072lb [4,569kg] and this represents the present maximum full load for the aeroplane; (2) The aeroplane we tested was L6845 and this is the first production aeroplane; (3) The estimated service ceiling is 30,300ft [9,230m] and the absolute ceiling is 31,000ft."

Elsewhere, Eric Mensforth, the Managing Director of Westland, had stated that L6845 was "identical to a production Whirlwind".¹ Nowhere was it recorded, however, that the "first production aeroplane" (in fact the second prototype) had very different propellers.

Remarkably, the prototype sent by Westland to Martlesham Heath as a representative of the production model was fitted with propellers of a one-off Rotol design, not the de Havilland (DH) props hung on all subsequent production