

AERONAUTICAL ACTIVITY IN GERMANY

Germany's *Luftstreitkräfte* as seen by RAF Air Intelligence during October 1918 (TNA AIR1/1977/204/273/66)

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The spelling, grammar and punctuation of the original have been retained in this transcript, as has the general layout

Introduction

- (1) It has been manifest for some time past that aeronautical developments of a decided character have been taking place in Germany. The importance of these activities from the military viewpoint depends very largely upon the accuracy of the conclusions arrived at after due consideration has been given to the evidence now available.

Development

- (2) Briefly, German aeronautical design tends to concentrate upon three distinct types – the single seater and in a lesser degree, the two seater fighter
the infantry machine
the bomber
the work of the reconnaissance being combined with that which is normally performed by machines of each of the types.

(3) It is by no means suggested that the essentially reconnaissance types of aeroplane will disappear entirely from the Front, although that may ultimately transpire as the result of the development of fighter reconnaissance types and the immediate needs of aerial warfare; but they will cease to be such an important branch of the German Air Service as at present. Hence, the primary function of aircraft, namely reconnaissance, will be subordinated to that which is secondary, fighting and bombing, and which is only resorted to in order that reconnaissance and artillery registration may be carried out and that on the part of the enemy prevented. In other words, an essentially destructive policy has been adopted as opposed to a constructive one. In consequence, it would appear that the German Air Service will undergo substantial re-distribution in the near future, in order to meet the altered conditions which now obtain.

(4) In this connection it is useful to observe that the preponderance of artillery and reconnaissance flights has been largely due to the continuance of trench warfare for a long period, during which the armies engaged have been restricted in their movements. With the resumption of conditions partaking of the character of open warfare with a retreating army their duties, become less important and are of such a nature that they can be performed by flights whose primary duties are other than those peculiar to reconnaissance types of aeroplanes.

(5) The principal factor that has directly conduced to this change of policy has been the general aerial ascendancy established definitely by the Allies in 1918 – an ascendancy that has become more and more evident as time proceeded. At no time since then has Germany succeeded in evolving an aeroplane or an engine that can be regarded as equal in military value to corresponding types produced at the same time by designers in this country; while the skill, initiative, perseverance and daring of their pilots and observers directly reflects the quality of their machines, which is not surprising in view of the importance of morale in aerial warfare.

Influence of Stagnation in Engine Design

(6) This has been due, fundamentally, to their failure to keep abreast of modern engine development on one hand, and to production difficulties on the other. An examination of German engine designs reveals the fact that they have relied

practically exclusively on the six-cylinder vertical engine and that until recently little[e] had been done either to develop their old types, which were excellent mechanically, or to evolve fresh designs which are marked improvements on earlier types. Their standard engines from 1916 till well into 1917 were the 160 HP Mercedes and the 220 HP Benz and the latter continued as such into 1918. In early 1917, the 260 HP Mercedes made its appearance; but except for the higher power developed, it cannot be regarded as representing a distinct advance in engine design. These three engines were not fitted with altitude control and did not have high compression – improvements which have been introduced in Allied engines in 1916 and 1917; while it was not until the early part of this year that aluminium pistons were adopted. During the same period the Oberursel rotary and later the 240 H.P. Maybach which was fitted with altitude control, were also used; but only on extremely limited scale, while the former was extremely unreliable.

(7) At the present day, the standard types of engines still possess the attributes of their predecessors, they are mechanically excellent and generally reliable; but for modern war purposes they compare very unfavourably with those produced by the Allies; and the maximum horsepower developed is now insufficient to meet modern requirements. There is evidence that this is now recognised and steps have been taken to overcome their inferiority in this respect; but it is questionable whether the production of such engines has now been too long delayed.

Typical mid-war German aero engines, both six-cylinder, water-cooled inlines: top the 230-hp Benz, below the 260-hp Mercedes. :CCI Archive

