



XB-24

A new Consolidated land bomber poses for one of its first flight pictures. This four-engined ship has 4,800 horsepower in flight with a gross weight of about 40,000 pounds and 110 feet of wing spread. It carries a crew of from 6 to 9 persons.

AERONAUTICS

Air War on Present Scale Will Reduce Air Power

Planes and Pilots Are Being Destroyed at Rate Far Greater Than They Can Be Produced and Trained

CONTINUANCE of air fighting on the scale of the first few days of the German invasion of the Low Countries will cut the size of the contending air forces within a few months to the point of reducing World War II use and effectiveness of air power, aviation men predicted.

About 100 Nazi warplanes were shot down in the first day of real action. Though reliable reports of losses since then have not been received, it is probable that a ship mortality rate nearly as high is being maintained. At least 150 pilots were put out of action with the end of those 100 ships. This is higher than the maximum daily rate of plane and engine production in Germany, believed to be about 2500 planes a month or eighty to eighty-five a day, and is certainly far higher than the rate at which pilots can be turned out. It takes only a few days to produce a fighter plane and a few weeks for a bomber. But even the brutally stepped-up German pilot train-

ing program cannot train pilots in less than five months.

British losses are yet unknown, but the daily aircraft production rate in the United Kingdom is certainly less than forty-five. If the losses are not so high it does not mean that the R.A.F. is superior to the German Luftwaffe (it is not) but that full use is not being made of the English craft. The British government may be keeping them in reserve for attacks on England from the bases Germany will obtain if she wins out in Belgium.

Air war today, in other words, is about to run full tilt into the mechanical limitation of how fast planes can be built and the human limitation of how fast pilots can be taught to fly. This has not happened before.

Because of the longer time involved in training a pilot, the pilot supply is likely to be the more serious limitation. In the case of Germany, gasoline is also a likely brake on Blitzkrieg.

The Allies today have not more than 15,000 pilots ready for action. If 50 Allied planes a day are shot down, that means that 75 pilots are no more, which adds up to more than 2200 a month. This is certainly more than are now being graduated. The Empire air training program will not turn out that many flying men of all kinds (gunners and observers as well as pilots), let alone pilots, when it is fully under way, which it will not be for close on to another year. It is also extremely unlikely that Germany is graduating 75 pilots a day.

The rates of decline of the different air forces, of course, are the differences between losses and production. The German Luftwaffe's strength is currently between 11,000 and 20,000 planes. Even at Germany's high production rates, the loss of 100 ships a day will make itself felt in a few months, though not so quickly as the loss of pilots. Allied ship casualties at a similar rate would cut the Anglo-French air arms in half in a short time. Allied strength is now eight to eleven thousand for the R.A.F. and 3,500-6,000 for the French; many units, however, are in the Near East or the colonies.

Present casualty rates may be higher than experts figured before Sept. 3, 1939. The U. S. Army Air Corps fixed plane losses at 25% a month, the English at 30% a month and Germans and Italians at 50% to 80%. These percentages are figured against total air forces. A 100% figure simply means replacement of an entire air force once a month, obviously impossible for today's swollen air arms. German difficulty in keeping up air strength when losses are 100 a day means difficulty in keeping her air force up when the monthly casualty rate is about 30%.

Pilot and plane production headaches will thus soon put a powerful brake to the extravagant employment of air power. Air forces will be stabilized at a level which is a compromise between casualty rates and production figures. This level is certain to be far below present strengths—each side may have at most a few thousand aircraft on active service.

It will be noticed that there has been omitted consideration of the effect of bombardment of aircraft factories on this analysis. The reason why is the impossibility of predicting how seriously air bombing of factories will affect production rates. We know only that it will cut them down. Aerial destruction of factories will thus lower still further the level at which air forces can be maintained, but how much cannot now be told.

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