



BRITISH AERO ENGINES

*An Unparalleled Diversity of
Types : Still More Power for
Military Use*

It is fairly safe to say that a more diverse range of aero engines is available in this country than anywhere else in the world. The numerous licences acquired for the construction abroad of many types bear witness to their quality, to say nothing of the large batches which are continually being exported. Frequently British engines are specified for machines purchased by one Continental nation from another, and a recent European order for two American transports required the installation of power units made in this country.

The past year has seen a pronounced increase in output from standard engines, resulting from the use of high octane fuels and new materials and processes. Some interesting new units have been produced, chiefly in the low power class, catering for the present interest in ultra-light aircraft, and it is known that it will not be long before some completely new and extremely efficient units at the other end of the scale are in production.

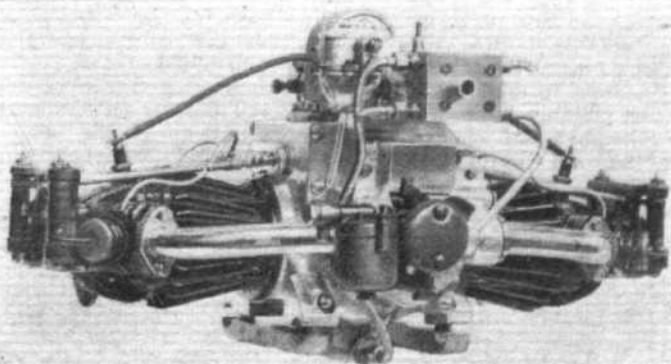
A.B.C.

IN 1912 the late Harry Hawker established a world's duration record in an A.B.C.-engined machine with a flight of 8 hr. 20 min. During the war the A.B.C. Company, whose present address is Walton-on-Thames, Surrey, produced no less than four types of engine for the Government, but since the termination of hostilities little work has been done on the aero engine side. With the development of the light aeroplane, however, attention was given to the design of a power plant suitable for installation in that type of machine. The result was the A.B.C. Scorpion, now produced in its Mk. II form, giving 34-40 h.p. It is a twin-cylinder horizontally opposed air-

cooled type and can be mounted either as a tractor or a pusher. The induction manifold is cast integral with the crank case and serves to heat the mixture and cool the oil. Cylinder heads are of cast iron and are bolted direct to the steel barrels, and two valves, operated through push rods, are fitted to each cylinder.

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AT their Kingswood (Bristol) works, Aero Engines, Ltd. intend to manufacture under licence certain engines of the Hispano Suiza range and the units which were, until quite recently, being developed by General Aircraft, Ltd.



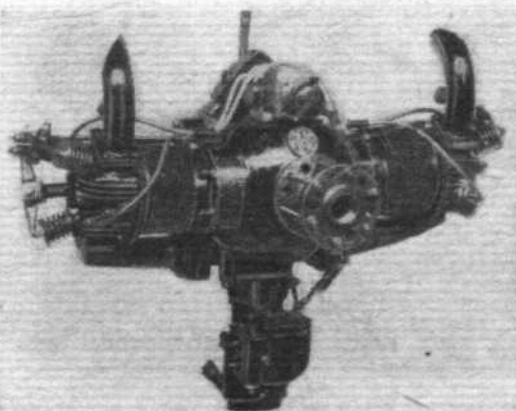
Unusual finning is a feature of the Aero Engines Mk. 1.

These latter are "Vee" type air-cooled engines. At the same time the Company is producing a small 750 c.c. engine known as the Mark I.

Of horizontally opposed twin-cylinder four-stroke air-cooled type the engine is suitable for installation in ultra-light aircraft. Its normal output is 21 h.p. at 3,000 r.p.m., but at 4,000 r.p.m. it gives a maximum of 26 h.p.

The cylinders are of cast iron and have detachable heads fitted with large ports. Aluminium alloy is used for the crank case and the steel connecting rods are hardened and ground at their big ends for roller bearing, and have duralumin small end bushes. Arrangements have been made for the alloy-steel crankshaft, which runs in ball bearings, to take the thrust in either direction.

Lubrication is on the dry sump principle, a duplex gear pump supplying oil to the crankshaft and returning it to the tank after circulation. A B.T.H. magneto with ignition advance control inter-connected with the throttle lever, a Zenith carburetter and an A.C. fuel pump are fitted as standard equipment.



The A.B.C. Scorpion gives 40 h.p. at maximum r.p.m.