

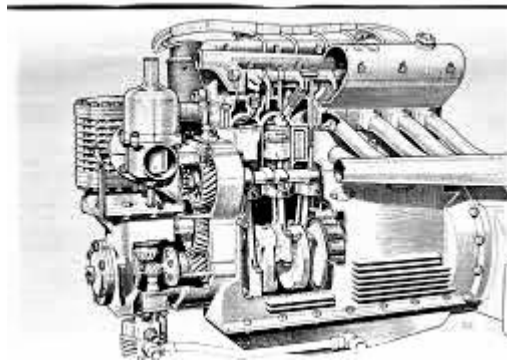
Note 128



The ERA crankshaft centre bearing

In 1933 Murray Jamieson designed a new stronger crankshaft for the 1.5 litre 6-cylinder “White Riley”, conceived by Raymond Mays and sponsored by Victor Riley (DASO 446). This was to be Pressure-Charged by a Roots-type blower, also of his design. He had to adopt the 3-bearing layout of the “donor” Riley engine crankcase and his solution for the centre bearing was -and still is – unique.

A pair of full-diameter (6”?) circular webs supported a small number (12?) of large diameter (1 ¼”?) rollers, made by the American firm of Hyatt. These *may* have been built-up to have some radial resilience. The shaft with this assembly was inserted end-on into an outer race mounted in the crankcase. This description can best be followed in the figure below.



riley-prewar-specials.com

The new crankshaft basic design was incorporated in 1934 into the first, and all subsequent, ERAs. It therefore coped with strokes varying from 2 ¾” (69.85 mm, for 1.1 litres) through the “standard” 3 ¾” (95.25 mm, for 1.5 litres), to 4 13/64” (107.76 mm, for 2 litres), at RPMs up to 7,500 and boost pressures up to 30 psi. The literature does not mention any trouble with the centre bearing.

[It is hoped that any visitor to this website who has detailed knowledge of this remarkable bearing will be good enough to contact the author by the E-mail link “enquiries@grandprixengines.co.uk” to improve the description. It is also recognised that its conception *may* be due to Percy Riley.]