

THE ENFIELD CYCLE COMPANY LIMITED

FROM MAJOR V.T. MOUNTFORD.

TO MR. G.D. BAKER, MR. P. WELSHER,
MR. J.J. BOOKER, MR. R.A. WILSON-
MR. C.A. BOOKER, JONES.
✓ MR. R. THOMAS,

.....2nd July, 1962.....19

250 c.c. PISTONS.

CRUSADER SPORTS :

Compression ratio on 'CONSTELLATION' Piston with wrong valve pockets = 8.5 : 1.

Compression ratio on 'CONSTELLATION' Pistons with correct valve pockets = 9.4 : 1.

Compression ratio should be within 8.75 - 9 : 1 and to achieve this with the 'CONSTELLATION' Piston with correct valve pockets involves raising the barrel by .026". It was found that by fitting two paper cylinder base washers the compression was 9.26 : 1, and it was agreed that this as a temporary measure was acceptable, and it was arranged that all machines and engines in stock and engines to be built immediately should be fitted with 350 c.c. heavy pistons with the correct valve pockets and two cylinder base washers.

Mr. Jack Booker is testing at M.I.R.A. a light 350 c.c. (or 'CONSTELLATION' Piston), with the new valve pockets and if these are satisfactory we shall then use the stocks of 120 'CONSTELLATION' Pistons and 700 - 350 c.c. light pistons.

In the meantime we are obtaining a quotation and delivery promise from Hepworth & Grandage for the redesigned 250 c.c. piston to Drawing No. 43723/B (modified).

From the above it appears that a compression plate should be 26 gauge (.018") which with the two paper washers (compressed to .008" each) would give a compression ratio of 8.75 : 1, which is what is ideally required.

Mr. Welsher is investigating the possibility of making these and in the meantime Mr. Thomas has ascertained that the people who supply our paper gaskets could make us some out of .017" thick aluminium and we are now ascertaining quantities

SUPER-5 :

The 'SUPER-5' piston with the single angle valve pocket gives a compression ratio of 9.55 : 1.

The 'SUPER-5' piston with a double angle valve pocket gives a compression ratio of 10.3 : 1.

These figures are suspect and the compression ratios are being checked.

If they are correct a compression ratio of 9.25 is required, which involves raising the barrel .031" and therefore a compression plate of 23 or 24 gauge (.024" or .022") with two paper washers is required.

No decision can be taken on this until the compression ratios have been confirmed.

CYLINDER BARRELS :

Mr. Welsher is ascertaining how many cylinder barrels we have in machines, in engines and in stock, production and service, with a view to ascertaining how quickly cylinder barrels can be lengthened if necessary.

GENERAL :

It is intended in future to use the same barrels and pistons in the 'SPORTS CRUSADER' and the 'SUPER-5' as soon as present stocks permit and to achieve this, barrels will possibly remain unaltered, the dome of the piston will be reduced with more metal being left in the dome of the piston by altering the inner die. Mr. Wilson-Jones to investigate and report.

It is essential for service purposes that accurate records are kept of the pistons etc., fitted to individual engines.

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