

R.H.T.

(2)

MINUTES OF THE MOTOR CYCLE DEVELOPMENT MEETING HELD ON TUESDAY,
13th SEPTEMBER, 1960

PRESENT : Major V.T. Mountford.
Mr. J.J. Booker.
Mr. G.D. Baker.
Mr. R.A. Wilson-Jones.

Mr. R.H. Thomas was absent on holiday.

Matters arising -

1) SILENCERS :

Subsequent to the Meeting held on the 8th August, it had been decided to revert to a silencer having a perforated tube in the cone and with a single baffle in the centre of the body.

Tests on such a silencer indicated that it was satisfactory so far as noise and mean maximum speed was concerned, but that it caused considerable misfiring when accelerating in top gear from 40 m.p.h. - this was thought to be possibly due to the fact that on the previous tests the spiral baffle had been welded to the rod, whereas on the latest version the baffle was spot welded to the body of the silencer, as this facilitated assembly.

It was, therefore, decided to carry out further tests with the spiral baffle welded to the centre rod and reduced in diameter so that the outside circumference of the baffle was less than that of the silencer body - this would facilitate assembly.

This silencer was tested following the Meeting and was found to be satisfactory from the point of view of acceleration, and arrangements have been made to manufacture silencers accordingly.

END CAPS :

Experiments have been made with various ways of drilling the aluminium end cap of silencers and the best results on both Crusader and Constellation was obtained by a 1" hole drilled in the outlet slot and it was decided that future caps should be drilled accordingly. (The small holes in the end of the cap which had been tried do not give consistent results on both the Crusader and Constellation Models.)

2) NEW REAR MUDGUARD ASSEMBLY :

Mr. Booker reported that delivery of 6 to 8 of the fibre glass mudguard mouldings would be made this week. It transpired that the difficulty which had been experienced with sample mouldings was not so much due to any difference in the sample mudguards, but was caused by the fact that the mudguard carriers differed in dimensions - Mr. Baker will arrange to have the mudguard carriers "set" in future.

The Suppliers of the glass fibre mudguards can only give delivery of 10 per week off one mould, and they are arranging, therefore, to produce an additional mould so that we should receive delivery at the rate of 30 per week within the next 14 to 21 days.

It appeared unlikely that the delivery of glass fibre mudguards would be sufficient even at this rate for the production of the Models to which it is to be fitted and as soon as the metal mudguards are therefore available from Elm Metals, it may be decided to restrict the glass fibre mudguard to certain Models and to fit the metal one to others until all the glass fibre ones on order have been absorbed.

3) FRONT FORKS :

Tests have proved that the front forks fitted with heavier gauge main tubes of 'B' quality tubing are satisfactory - the main tubes which have been used for prolonged tests over the Pave and in Scrambles have only set .015" which is very much less than any fork which we have produced in the past.

They tend to give a slightly hard ride and Mr. Wilson-Jones was asked to specify a weaker spring and some variation to the port holes to correct this. Conditional upon this being done, any future Sanctions for forks should incorporate the 'B' quality main tubes.

4) METEOR MINOR FORK :

A design for the new fork for this Model, referred to in Minute 2 (c) of the last Meeting, was still awaited.

5) OILING :

No solution had yet been found to this problem, but Mr. Booker reported that Westwood had experimented with an engine on which a hole was drilled from the crankcase into the oil tank and a $\frac{3}{4}$ " pipe leading from the oil tank into atmosphere - this had proved quite unsatisfactory, it being reported that all the oil had been blown out of the tank through the pipe.

Westwood now had an engine with an open breather connecting the crankcase direct to atmosphere, the oil tank being by-passed by means of a small pipe. Mr. Booker was going to see this engine tomorrow and would report on its possibilities following his return.

Some difficulty was foreseen in by-passing the oil tank by means of a pipe, and Mr. Booker was to investigate whether a large diameter breather could be accommodated in the crankcase in the same position as the present side breather.

6) LOUVRED SUMP PLATES :

Mr. Wilson-Jones reported that tests of these had not yet been completed.

7) ALUMINIUM CYLINDER BARREL :

The problem still remains of obtaining pistons with a satisfactorily even deposit of chromium plate or lighter Cross pistons.

Mr. Wilson-Jones reported that tests had indicated that the use of an aluminium barrel did not enable the compression ratio to be increased by any appreciable amount and he therefore enquired as to the advisability of fitting aluminium barrels. In reply to which, it was pointed out that the advantages lay in reduction in weight and sales appeal, and it was confirmed that these tests were to continue.

Mr. Wilson-Jones was in correspondence with Cross with regard to the possibility of producing lighter pistons, but it was doubted if this could be done, except if we were prepared to order dies to enable the castings to be produced. In the meantime it was suggested that Mr. Wilson-Jones should contact Messrs. Cannings, as plating specialists, to see if they had any suggestions to make regarding the possibility of ensuring an even deposit of chromium plating on pistons.

N.B. It was noted that orders had been placed with Messrs. Murcotts for the production of dies for the production of cylinder barrels and it was suggested that whenever new designs of cylinder barrels or heads were contemplated in future that these should have narrow pitch finning (a la Triumph).

8) CON-ROD BOLTS :

Mr. Wilson-Jones reported that he had not received any reply to his letters from Messrs. Unbrako, regarding the high duty bolts, to which he referred at the last Meeting, and he was asked to pursue this matter with a view to obtaining sample bolts and quotations.

On experimental engines received from Westwood recently, the split pins had been omitted from the con-rod bolts as arranged, and Mr. Wilson-Jones was to report on these.

9) REAR SUSPENSION :

Rear swinging arms fitted with rubber bushes having proved entirely satisfactory, it was agreed that all future Sanctions would incorporate this design.

10) CLUTCHES :

Mr. Wilson-Jones reported that no action had been taken by him regarding the clutch operating push rod on Albion clutches, referred to at the last Meeting, and he was asked to deal with this matter without delay. Mr. Booker commented that Moto Guzzi previously had the difficulty of keeping the clutch operating rod lubricated, as he had noticed that their design employed a series of short length push rods alternating with balls for a length of about 2".

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