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Minutes of the Motorcycle Development Meeting
held on 7th July, 1961.

Present:- Major V.T. Mountford
Mr. J.J. Booker
Mr. G.H. Baker
Mr. R. Thomas

Mr. R.A. Wilson-Jones was absent owing to illness.

Matters arising:-

1.- Delivery of the following parts must be urged:-

Fork main tubes
Ball head clip
Bottom link steel stamp

2.- Bottom Link Front Forks:-

The spring length has now been decided, the schedule altered and orders placed for earliest possible delivery.

3.- Lubrication on 700 cc Engines:-

All timing covers on twin engines at Redditch have been modified, and Westwood have been requested to deal with those in the course of production.

Mr. Booker is continuing experiments on 700 cc engines with the camshaft tunnels opened out into the crankcase, and will report from time to time.

4.- 750 cc Engine:-

Westwood have redesigned the crankcase for the 750 cc incorporating some of the modifications we have found beneficial. The 750 cc engine will require a modified engine plate, which is to be increased in gauge - Mr. G. Baker to advise by what amount the gauge can be increased to use the existing tools. A bracket supporting the back of the primary chaincase has been designed, and is to be fitted to all machines as soon as possible.

5.- Silencing:-

The silencer containing glass wool cartridge at present fitted to a 350 cc Bullet is to be bench tested as soon as possible on a

250 cc engine.

Experiments are to be started immediately utilizing a depressed slot type of centre tube similar to the heavy weight Burgess. Mr. G. Baker will find the silencer made previously with the above type of tube, and from this a further design will be made. It is considered that this type of construction holds out more promise of reducing noise level than anything, and is therefore to have priority over everything.

6.- Pistons for 250 cc Super Sports:-

Reference the last Minutes of the Meeting on June 2nd, Page 3, Paragraph 5, delete the word "Super" in line 3.

The pistons for the Super Sports Crusader are on order from Messrs Hepworth and Grandage, and should be here in time to commence production.

7.- Pistons for Crusader Sports:-

Reference modifications to Constellation pistons for use in Crusader Sports machines, Westwood say that they are unable to undertake the necessary machining. Therefore these will have to be modified at Redditch. Arrangements are being made for these to be drawn from Westwood as required.

8.- Five Speed Gear Box (Constellation):-

A quotation from Messrs. Albion for the five speed gearbox is required as it is intended that this will be offered as an optional extra for the 1962 Season.

9.- 350 cc Crusader:-

The design for the five plate clutch has been completed using a malleable iron clutch drum and sprocket and PTFE plain bearing. The drum has been sent away for friction linings to be fitted by Armstrong's. A set of plates are already available for this clutch, and as soon as the drum is back, the clutch can be assembled and tested. Another clutch is being built with a drum made from the present stamping to which the friction facings have been fixed by Cork Manufacturing Co. - a set of plates are available for this. After discussion it was decided that both experimental clutches should be fitted with the Cork Manufacturing Co. J.17. friction linings.

Mr. Booker will enquire from Messrs. Albion as to whether stronger material can be used for the gears and other critical parts.

Mr. Wilson-Jones to report immediately regarding the possibility of obtaining the pistons from an alternative source.

With reference to the exhaust valve burning, Mr. Booker reported that there had been another instance on one of the Trials models, and that he had handed it to Mr. Wilson-Jones, who is having it analysed. Mr. Booker will investigate the alternative cost of EN54 and EN54A.

10.- 250 cc Frame:-

A frame with B quality side tubes having been built, this is to be fitted to the prototype Crusader Sports and sent to M.I.R.A. during the course of the present month. Tests of this on the Pave will give us further opportunity to test the rubber bushes fitted to the bottom link of the Crusader Super Sports front fork. The machine is to be built immediately.

In view of the difficulty of getting machines roadtested owing to the shortage of riders, it was agreed that a design should be produced for a frame testing machine.

11.- 175 cc Engine:-

Mr. Thomas produced a general arrangement for a 175 cc push road operated engine. He is now continuing to produce a design for an overhead camshaft engine, and hopes to have this ready for the next meeting. Mr. Thomas was asked to co-operate in the design of a cluster type gearbox.

12.- Siba Self Starter:-

The machine with the Siba Self Starter is now fitted with two Lucas SC7A Police type batteries, and the system is unsatisfactory. Whilst the equipment will start the engine under ideal conditions, it would be quite unthinkable to offer a machine with this equipment for public use. The machine should therefore be fitted with 24 v equipment as soon as possible. Mr. Thomas stated that he has the special switch for this modification.

13.- Chromium Plated Cylinder Bores:-

One is in use on a machine; two further barrels have been sent to Metco for metal spraying, but in the meantime Westwood are continuing with experiments on a Cross piston.

14.- Scooter:-

The Scooter has been reassembled with a modified hand gear, and whilst this appears to be stiff, the gearbox is being run in and a decision regarding this will be made within the next few days.

If this is unsatisfactory, a design must then be produced as quickly as possible for a foot gear. The possibility of a cluster type gearbox, which will cut down operational travel is to be considered.

15.- New Fork Head Clip:-

Held in abeyance until present stocks are exhausted.

16.- Gross Cylinders and Pistons:-

There is no progress to report - this is being dealt with at Westwood.

17.- Batch Tests:-

It was agreed that the next two machines for batch test would be a 250 cc Clipper and a Super Meteor.

18.- Nylon Idler Gears:-

It is most unlikely that gears machined from nylon would be as cheap as moulded nylon gears.

A more strenuous test for nylon in the form of a gear would be the Idler gear driving the oil pump spindle on a 250 cc machine. It was agreed that Mr. Baker would produce two or three of these for test on experimental machines.

19.- 750 cc Constellation:-

Mr. Booker was asked to prepare a specification for the new 750 cc Constellation. The following items were mentioned as worth consideration:-

Pressed steel casquette
Five Speed Gearbox
New tank shape
1960 type rear mudguard
The use of plastics instead of metal pressings
where practicable
Thruxton handlebars
New steel tool box lids and panels