

Nov 12th 1969

Piston Stockists

SOUTH LONDON PISTONS

LONDON - RODNEY 2156

PAUL BACKHOUSE

MANCHESTER - CENTRAL 8361

JOHN THORNTON

SHREWSBURY 51378

A E AUTOPARTS, BRADFORD

0274 / 34191

Nov 13th 1969

800 Cylinder Barrels

No 1 B (D/Side)

Drawing size 2.8940 / 2.8935 "dia."

THRUST - FROM TOP

90° TO THRUST - FROM TOP

1/2 2.8940

2.8937

1 1/2 2.8937

2.8937

2 1/2 2.8938

2.8935

3 1/2 2.8935

2.8935

4 1/2 2.8935

2.8941

5 1/2 —

2.8936

N° 9 PISTON
FITTED

N° 2 B (T/Side)

1/2 2.8936

2.8936

1 1/2 2.8936

2.8936

2 1/2 2.8936

2.8936

3 1/2 2.8936

2.8936

4 1/2 2.8937

2.8938

5 1/2 —

2.8937

N° 11 PISTON
FITTED

800 Pistons

Nov 13th 1969

	Oil Scaper Ring Groove	Top Land	2nd & 3rd Lands
N ^o 1 Piston	2.544"	2.876	2.881
N ^o 2 -	2.542"	2.877	2.880
N ^o 3 -	2.539"	2.875	2.879
N ^o 4 -	2.541"	2.876	2.880

CHALK GUN REFILLS

4-12-69

IMPERIAL CHEMICAL INDUSTRIES LTD.,
NOBEL DIVISION,
CALLERTON EXPLOSIVES SALES DEPOT,
STREETHOUSES,
PONTELAND,
NEWCASTLE-UPON-TYNE.

SALES ORDERS - PONTELAND 3285.

SHORT DELAY DETANATORS, DELAY N^o 2,

WIRE 120, DETANATOR STRENGTH 6.

CHALK PELLETS TO SUIT.

Special 10 $\frac{1}{2}$:1 Interceptor pistons by Jack Gray of
Gander & Gray purchased from:-
SYLICUM PISTONS

PENN

HIGH WYCOMBE

BUCKS

March 1970

AMERICAN MOTOR VEHICLE SAFETY REGULATIONS

CONSUMER INFORMATION

PART 375

6TH Nov 1969

Visited MIRA and discussed methods of testing with MR CRAY, MR DARWALL, MR ASTON.

11TH Nov 1969

MET MR HAYES, MR BANNISTER, MR IAN SUTTILL.

Took measurements for fitting :- CHALK GUN, TEMP. GAUGES, TAPE RECORDER, 5TH WHEEL, TAPLEY BRAKE EFFICIENCY METER.

Instruments weighed as follows :-

Tape Recorder 7.4 lbs.

Chalk Gun 3.4 lbs.

Tapley meter 1.9 lbs (without bracket)

5th Wheel 34 lbs.

~~18th~~ 18th Nov 1969

Attempted acceleration tests on 1 mile straight towing 5th wheel. Machine difficult to control.

Vibration affected the instruments and spoiled the results.

Calibrated the motorcycle speedometer on the timing straight.

Results - Instrument reading

Actual speed

20 mph

17.66 and 18.29

30

28.10

40

36.99

50

47.96

60

59.30 and 57.56

BRAKE TESTS

Humidity 82%

Baro Press 29.5

Temp 60°F

Wind velocity 8-18 mph in S.W. direction

Down wind - lightly loaded - from 60 mph. ① 152 feet ② 130 feet.

" " + 50 lb

148 feet

20th Nov 1969

5th wheel and tape recorder could not be made to function correctly, and acceleration tests were carried out with stop watch and measuring tape.

Humidity 62%

Baro Press 29.5

Temp 45°F

Wind Velocity 10-15 m.p.h. in W to S.W. direction

Down Wind - Acceleration Test

Speed 20-35 m.p.h. - 2nd Gear	2.6 secs	89 ft.
" 50-80 " - 3rd & Top Gears	6.8 secs	568 ft
" 20-35 " - 1st Gear	2 secs	73 ft
" 50-80 " - 3rd & Top Gears	7.5 secs	693 ft

Up Wind - Acceleration Test

Speed 20-35 m.p.h. - 2nd Gear	2.5 secs	85 ft
" 50-80 " - 3rd Gear	7.2 secs	636 ft
" 50-80 " - 3rd Gear	8.2 secs	723 ft
" 20-35 " - 2nd Gear	2.7 secs	90 ft

Brake Test

Down wind - lightly loaded - from 60 mph - 130 ft

Up wind - +100 lbs - - - - - 128 1/2 ft

Up wind - lightly loaded - - - - - 123 ft

Average of Results

Acceleration

Speed 20-35 mph	2.5 secs.	84 ft
" 50-80 mph	7.4 secs	655 ft

Brake Test - from 60 mph

Lightly loaded condition 134 ft

Maximum " " 136 ft

12-2-70

New Fram Filter for Interceptor

Fram part number CAG43 PL

FoMoCo No 2720E-9601-A

9.40" ϕ /DIA \times 7.01" ϕ /DIA \times 2.24" Height

Phil Woods visit.

17-2-70

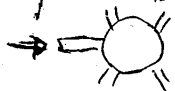
Notes on electrical specification for machines manufactured after 1 Jan 1971.

Light unit - Std 7" Continental light unit - this will be standard everywhere except it must be fitted with a yellow bulb for France.

Stop tail lamp - larger new design with side facing reflectors incorporated - new fixing points.

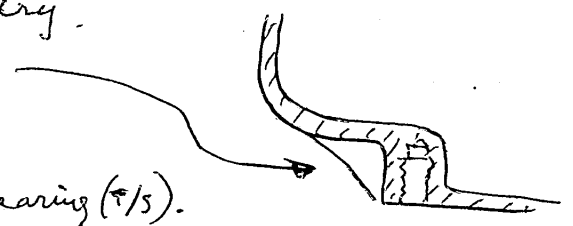
Side reflectors - rear ones will be part of tail lamp. front ones to be larger diameter (RER 14) or double-square type (RER 22)

Flashing indicators - Lucas can supply mounting stalks also required - flasher unit FL8 (1" sq \times 1/2" thick) - Flasher switch, separate handlebar fixing type or alternatively use new RH&LH switch assemblies.

- Lighter valves - smaller diameter stems.
- New alloy top spring caps to give longer inner spring length.
- Lighter rockers (unequal length arms?)
- Solid push rods.
- Ball end on push rods working in cups on tappets.
- Rubber mount carbs on 1" thick spacers and put heatshield between carbs and cylinder heads.
- High lift cams
- Close ratio gears.
- Stronger gearbox.
- New clutch operating mechanism.
- 10½ : 1 pistons.
- Finned rocker box covers.
- Move gearbox back .070" and use triplex chain on new type tensioner. Tensioner materials - teflon, polyurethane, neoprene
- Support timing chain tensioner spindle in separate outrigger bearing and enlarge timing cover dowels - long enough to locate before shafts enter seals.
- Take rubber moulding of Ex port shape
- Heat sink - no longer available from B.S.A.
- Silencer tests - noise reduction to 86 dbA.
- Elimination of crankcase fumes.
- Expanded metal filter on drain plug.
- Elephant's feet valve tappet adjusters.
- Finalise piston dimensions and ring specifications
- LMAP - alternative crankcase material.
- Modify rocker oil feed pipe assembly - fit flexible sleeve in "stem" of assembly or by five-way distributing piece above cylinder head
- 
- Nanonite 80 Ex valves? - Wiggins
- Softer washers under relief valve screws - Klingerite?
- Chamfer cam lobes instead of providing clearance on cyl barrels.

Champion Rubber Plug Caps - Type WC 200 - on test
Crankshaft - check with foundry.
Add ribs to d/side crankcase

Plug up lower hole in Ex crankshaft end bearing (4/5).



Ideas

- Toolbox with redesigned side panels.
- Longer seat - pleated top - modified shape at front
- Attachment to headlag as catch for front fork lock.
- New rear number plate arrangement - present plate splits.
- Italian handlebar grips
- Design new ball head clip to suit standard length
Commando forks.
- Use K 81 types and new mudguards to suit.
- New Lucas equipment to meet latest U.S.A. regulations.
- Rear mudguard bridge (front) fractures.
- Fit oil warning lamp.
- ~~Fit~~ Redesign frame with angular contact ball races.
- Use asbestos covered wire near diode
- Test "Concorde" silencers.
- Test with sidescan trail
- Self starter.
- Use softer springs for solo ax, $32\frac{1}{2}$ lbs/in instead of $36\frac{1}{2}$?
- Build 2nd 800 engine.

P.39 - LAYOUT TO DETERMINE SEAT HEIGHT
(UNLADEN)

5-APR-71

P.39 650cc TRIUMPH TROPHY (TANKS EMPTY - NO RIDER)

WEIGHT ON FRONT WHEEL 168 LBS

" " REAR " 211 LBS

ALLOW 16 LBS FOR OIL & PETROL. (8 ON FRONT, 8 ON REAR)

WEIGHT ON FRONT WHEEL 176 LBS

" " REAR " 219 LBS

ALLOW 45 LBS WEIGHT OF FRONT WHEEL,

" 50 LBS " " REAR WHEEL.

VERTICAL LOAD AT FRONT WHEEL SPINDLE = 131 lbs

" " REAR " = 169 lbs

$$\begin{aligned} \text{LOAD ON } \phi \text{ OF FRONT FORKS} &= 131 \times \cos 28^\circ \\ &= 131 \times .883 = \underline{116 \text{ lbs}} \end{aligned}$$

$$\begin{aligned} \text{LOAD ON } \phi \text{ REAR SPRINGS} &= \frac{169}{\cos 8^\circ} \times \frac{17.25}{14.63} \\ &= \frac{169 \times 17.25}{990 \times 14.63} = \underline{201 \text{ lbs}} \end{aligned}$$

LOAD ON EACH REAR SPRING = 100.5 lbs

PRELOAD AT SOFT SETTING = 104 lbs

REAR SUSPENSION IS FULLY EXTENDED.

FRONT FORK SPRINGS 97-4011

LOAD ON EACH SPRING = 58 LBS

PRELOAD = 15 LBS

RATE = 25 LB/IN

$$\text{DEFLECTION} = \frac{43}{25} = \underline{1.72 \text{ ins.}}$$

1/7/71 P.34 500 Primary Chimney - breather pipe
coming loose - case to be bossed up inside

2/7/71 P.34 Riders' ~~footrests~~ folding footrests "drooping"
also long bolt through frame bending.

1st alteration:- milled flat on brackets brought
closer to hole and pivot bolt 21-0512
with shorter threaded portion together with
washer 60-2321 used in place of bolt
threaded up to head.

2nd alteration to follow, brackets re-shaped to give
additional support inside folding rests.

Frame cross bolt increased from $\frac{3}{8}$ " to $\frac{7}{16}$ "
and material changed from EN8 to EN16T

20/8/71 P.34 Query regarding headlamp supports
97-4049 and 97-4051, samples will be
submitted to Mr Warren.

Supplier - Mr Leadbeater, Willenhall 65151.

20/8/71 P.34 Specification for 1972-250s - some 1971 models
to be up-dated. New air filter with
silencer tube

Glass fibre legshields for police model.