

# dunstall equipment

**dunstall**  
POWER





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## INTRODUCTION

Paul Dunstall, the first name in Special Equipment.

What is special equipment? Different things to different people. Some people think only in eyeable values. An embellishment — and that's that. Right, a single Dunstall item will certainly enhance the appearance of its designated model. Although Paul Dunstall is not in the skin-deep beauty business, he won't include drab-uglies in his lists. The Dunstall philosophy demands that components must be correctly designed, well engineered and properly finished. If light alloy is necessary from a design point of view, then light alloy it will have to be. If one item is designed to improve performance, the next must be absolutely complementary. The entire build-up of components must be balanced and co-ordinated.

With his special equipment he has made stock machines faster, more reliable and safer than the big factories possible. Beating them at their own game to such effect that in the past few years his machines have broken four world records, scored nearly thirty out-right race wins and smashed four lap records.

To help with design and development of new products Paul has accumulated many useful tools like the specially calibrated Dyno (specially modified for super accuracy). The electronic speed trap which is used to accurately check that extra performance is improving speed and acceleration by the desired amount. There is also the sound level measuring instruments which is used extensively in Exhaust System design and evaluation.



OCKIST



Paul Dunstall, the first name in Special Equipment.



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## HONDA POWER STREET EXHAUST SYSTEM

Part Number 1179 for CB 750

Part Number 1178 for CB 500

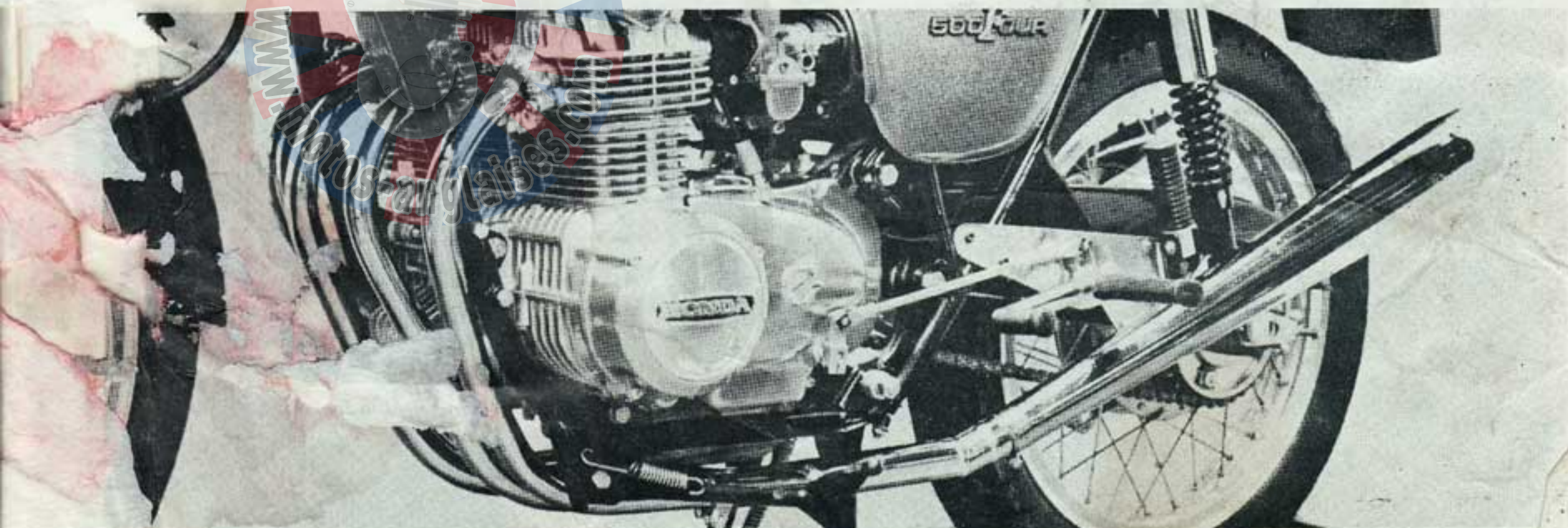
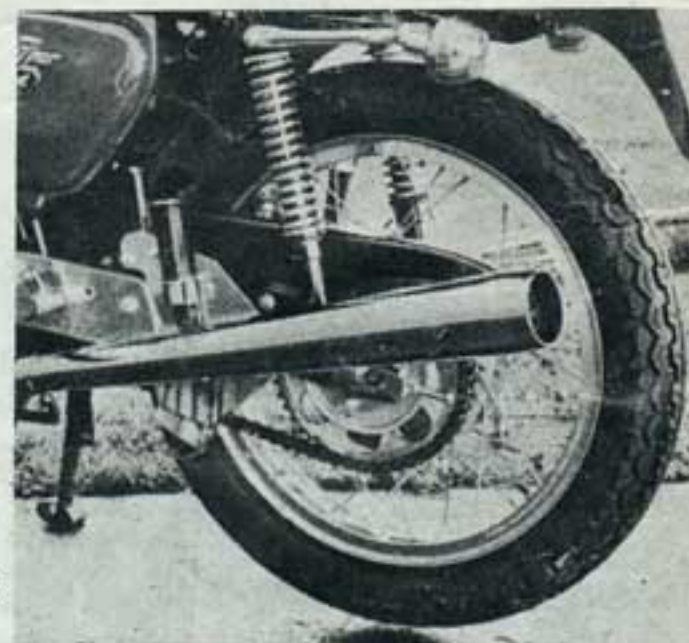


Both systems were developed with the aid of a specially programmed computer which enables us to calculate a pressure time diagramme over the whole rev range for any given exhaust system. After exhaustive analysis these coupled systems proved to be most efficient. Supplied complete with Dunstall Decibel Silencers and all fixing brackets and clamps.

Our own Dyno Tests, carried out on a CB 750, showed the following advantage in BHP over the stock Honda system.

+ 1.33 BHP at 3,500 RPM	+ 9.97 BHP at 5,500 RPM
+ 4.95 BHP at 4,000 RPM	+ 11.40 BHP at 6,000 RPM
+ 6.43 BHP at 4,500 RPM	+ 11.78 BHP at 6,500 RPM
+ 8.58 BHP at 5,000 RPM	+ 5.98 BHP at 7,000 RPM

These results were achieved by fitting the Dunstall Power System and at the same time increasing carburettor main jets by one size, i.e. 110 to 115. We recommend that one size larger main jets used in conjunction with this Exhaust.

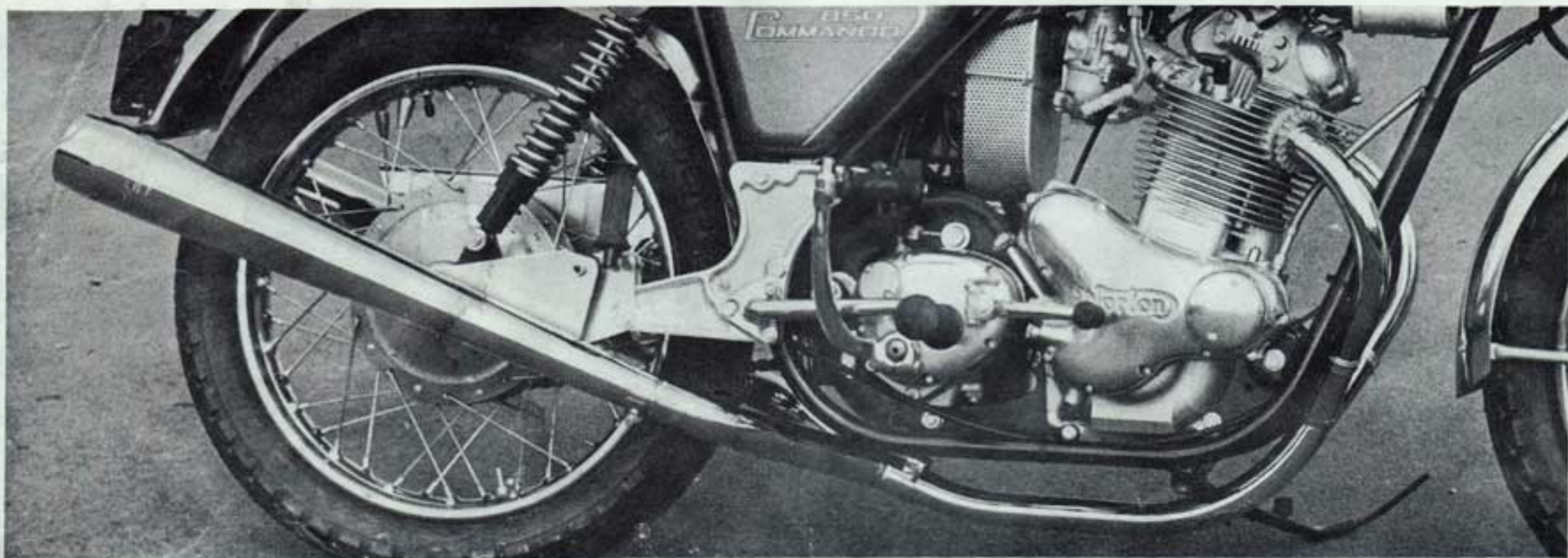




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## NORTON POWER STREET EXHAUST SYSTEM

Part Number 1175



This unique and unusual exhaust system designed in conjunction with Dr. Gordon Blair at Belfast University, offers greatly improved performance due entirely to the efficiency achieved by the design. It consists basically of two small diameter pipes coming from the exhaust ports and joining into one larger pipe which eventually splits back into two to join the Dunstall decibel patent silencers.

The lengths and diameters of each pipe were calculated mathematically to achieve a pressure wave cycle that would most benefit engine performance. With the aid of a suitably programmed computer it was possible to simulate the pressure waves that would be produced in the system in use. Critical alterations were then made to achieve the best possible simulated performance advantages over the whole rev range.





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The first road tests carried out by a independant journalist, proved its incredible efficiency by knocking 1.14 seconds off the standing quarter mile time of a Norton Commando just by changing from the stock system to this new Dunstall Power set up. The following figures give an exact comparison because only the exhaust system was changed, just off with the stock and on with this new one and we achieved the following results:

Stock Exhaust	New Dunstall Power Exhaust	Improvement
S.S. Quarter Mile 13.45 secs.	12.3 secs	1.15 secs
Terminal Speed 100 mph	105 mph	5 mph
Maximum Speed 120 mph	125 mph	5 mph

Available to fit all Norton Commandos and supplied absolutely complete with all clamps and brackets. Fits pre 1971 Commandos with no modification whatsoever, but on post 1971 models this system requires the removal of the centre stand. Note: This system only works with genuine Dunstall Silencers and not at all without Silencers as it is computed utilising pressure waves reflected back from decibel silencers.



Blair's exhaust system for the 810 is a marvel. Two short header pipes converge just in front of the forward engine mount, a single larger tube carries the exhaust below the engine, and it splits back into two mufflers right under the transmission.

According to Dunstall, the system is worth five mph in the quarter and five mph on top. It may well be. But performance improvements aside, the pipes are worth their weight in gold in terms of exhaust note and solid noise reduction. At last! A high performance exhaust system that honest-to-God muffles.

To Dunstall's patented Decibel megaphone silencers are added his new siamesed exhaust pipes, computer designed by Dr. Gordon Blair at Queens University, Belfast. (Blair, a specialist in gas flow, studied in America before returning to Ireland seven years ago). The pipes merge into one at the front of the crankcase and divide into twin outlets beneath the gearbox. Result of this work is to boost the standard Commando's 60 bhp at 6800 rpm to 70 bhp at 7000 rpm.

Extract from "Cycle" Road Test April 72.

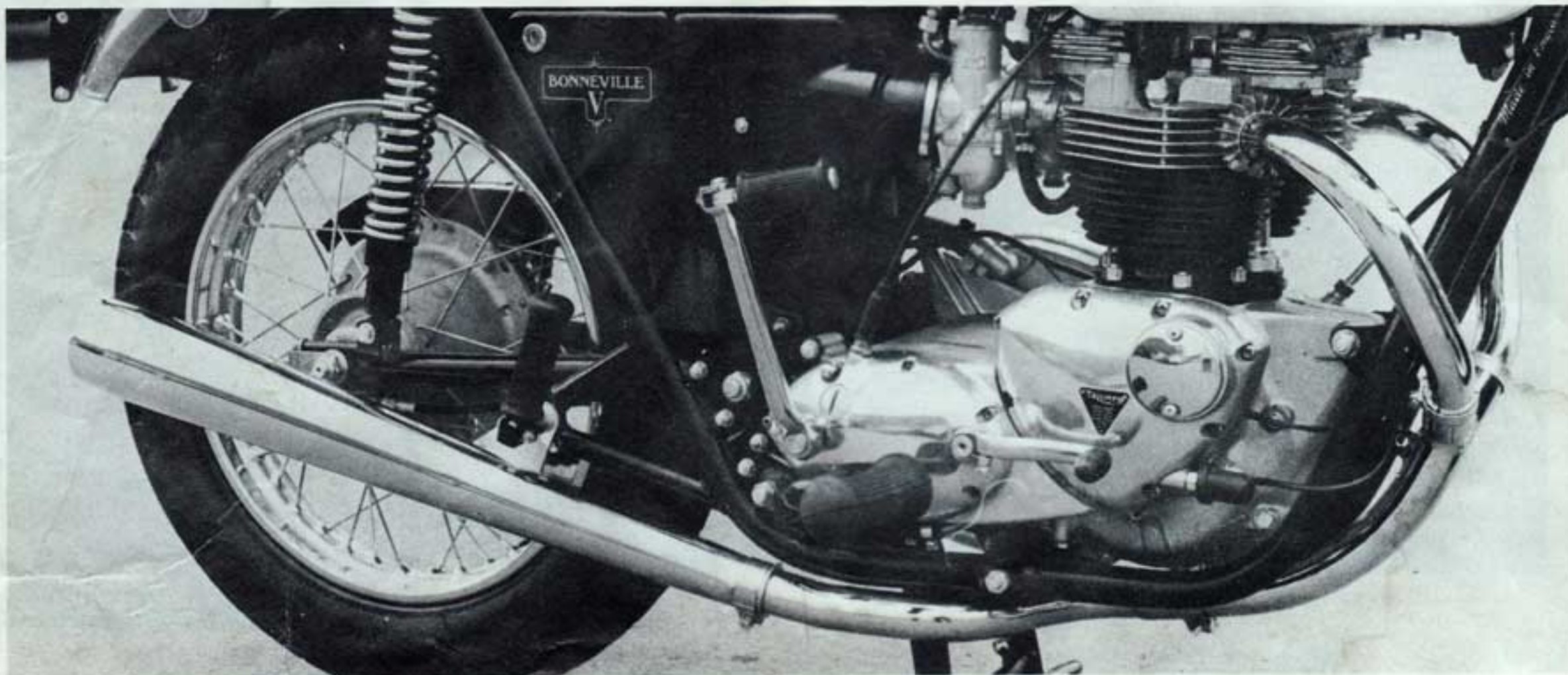
Reproduced by courtesy of "Cycle World"



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## TRIUMPH POWER STREET EXHAUST

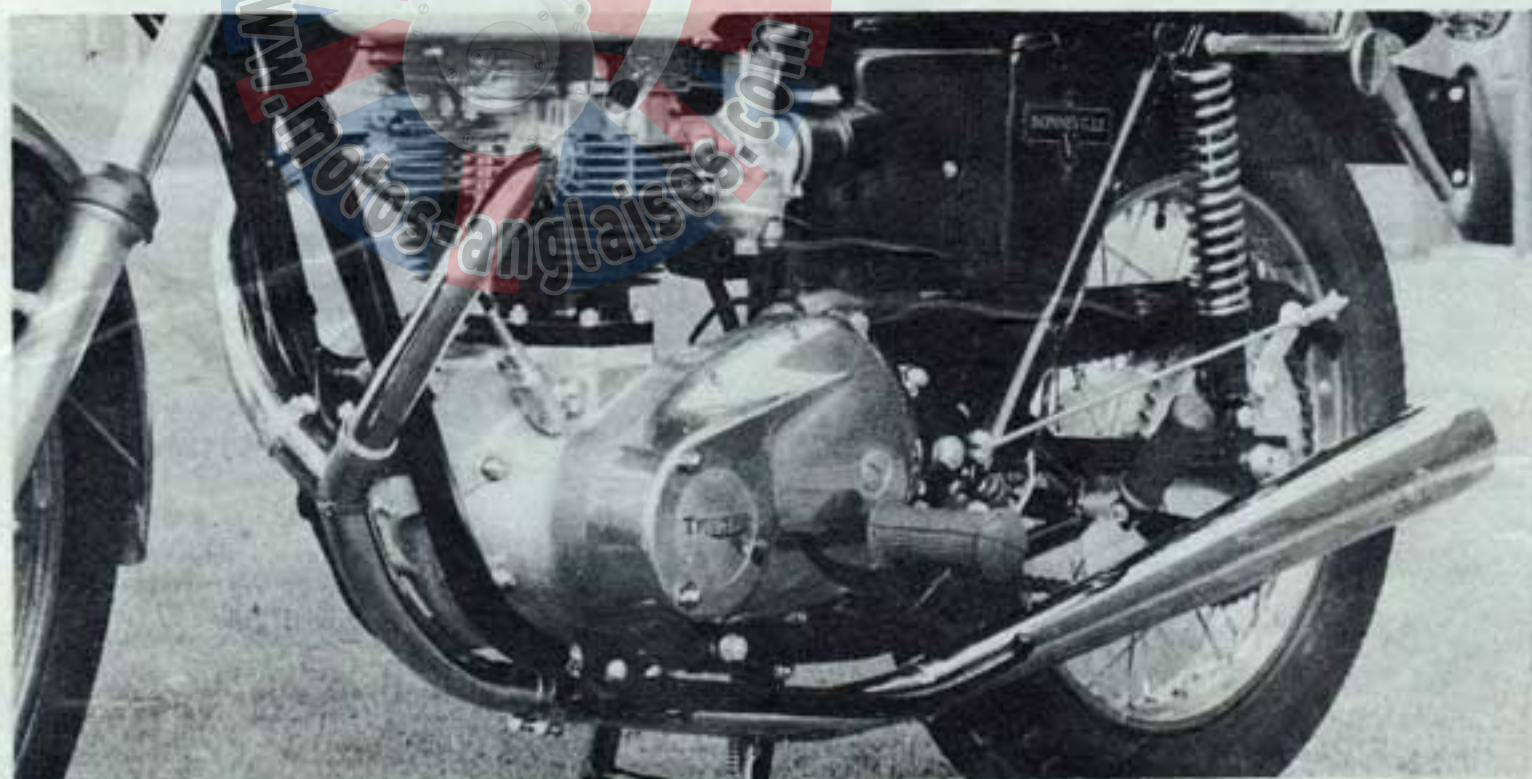
Part Number 1123/A



This new Dunstall Power Exhaust system fits 1971 and 1972 T120 models. This popular British Twin responds well to our new Exhaust, achieving better acceleration and higher top speed.

The performance increase is achieved by utilising the energy in the exhaust gases to help the breathing of the engine. Using the same complete programme as for the Dunstall Norton and Honda Power Systems we fed in the Triumph engine statistics and arrived at this System.

Road and Dyno tests verify its effectiveness and what is possibly more surprising is that it has a remarkably civilised and mellow exhaust note.





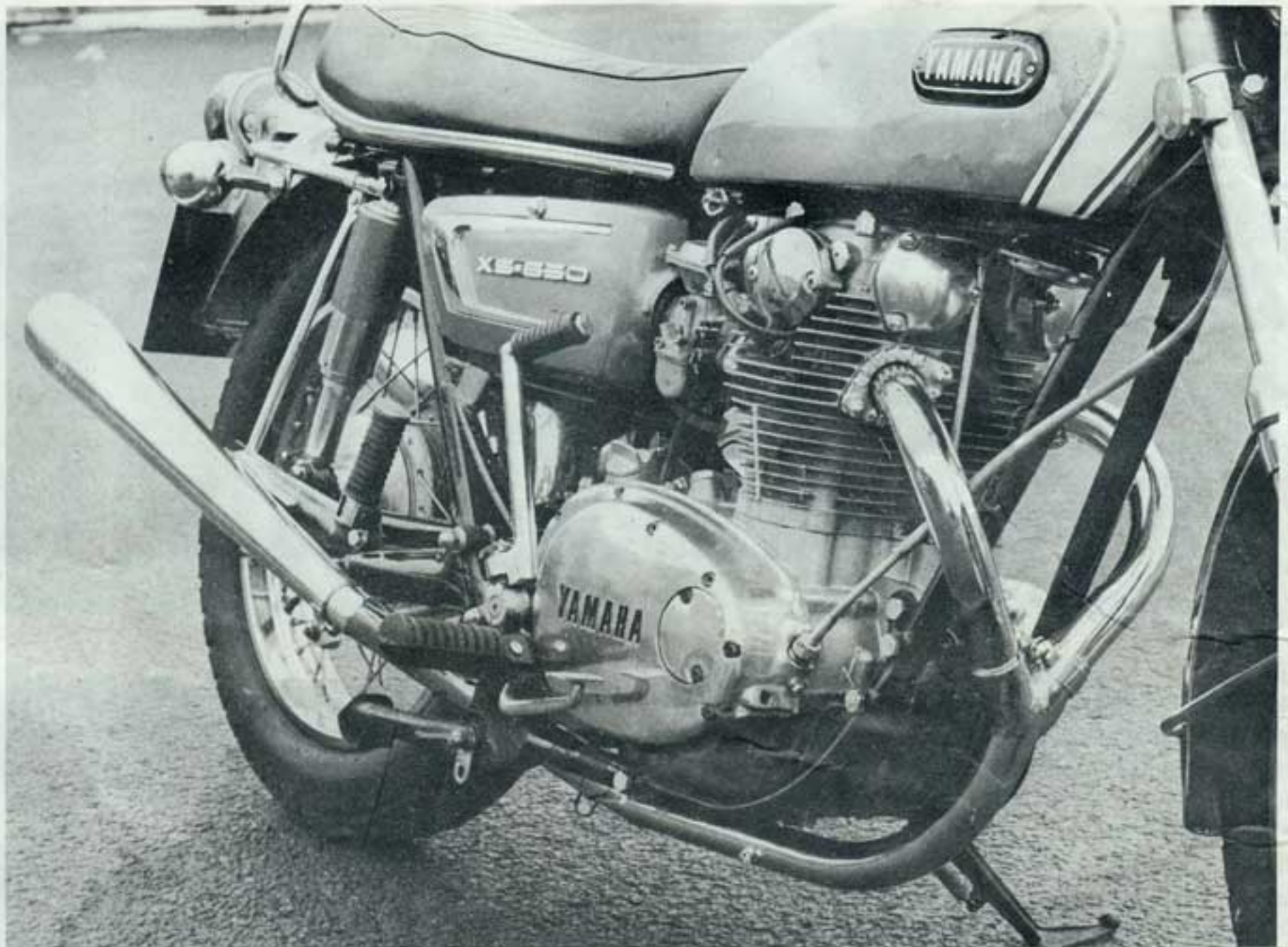
## DUNSTALL YAMAHA POWER EXHAUST

Part Number 1180

This new Dunstall Power Exhaust system fits all XS1 and XS2 Yamaha 650s. This well liked and reliable Japanese four stroke twin has its performance greatly enhanced by the simple bolting on of this complete Dunstall Power System. This System in fact gives you the following performance increases:

0.5 second improvement on S.S. quarter

5 mph increase in maximum speed.



This amazing performance increase is simply achieved by utilising the energy in the exhaust gases to help the breathing of the engine. Using the same complete programme as for the Dunstall Norton Power System, we fed in the Yamahas engine statistics and arrived at this System. Thus without complicated engineering modification, your Yamaha will outrun any stock XS1 or XS2 and on top of this will now have a superbly satisfying exhaust note. Gone will be the rather harsh bark of the stock system and in its place will be a smooth deep throated note that is quieter yet powerful sounding.

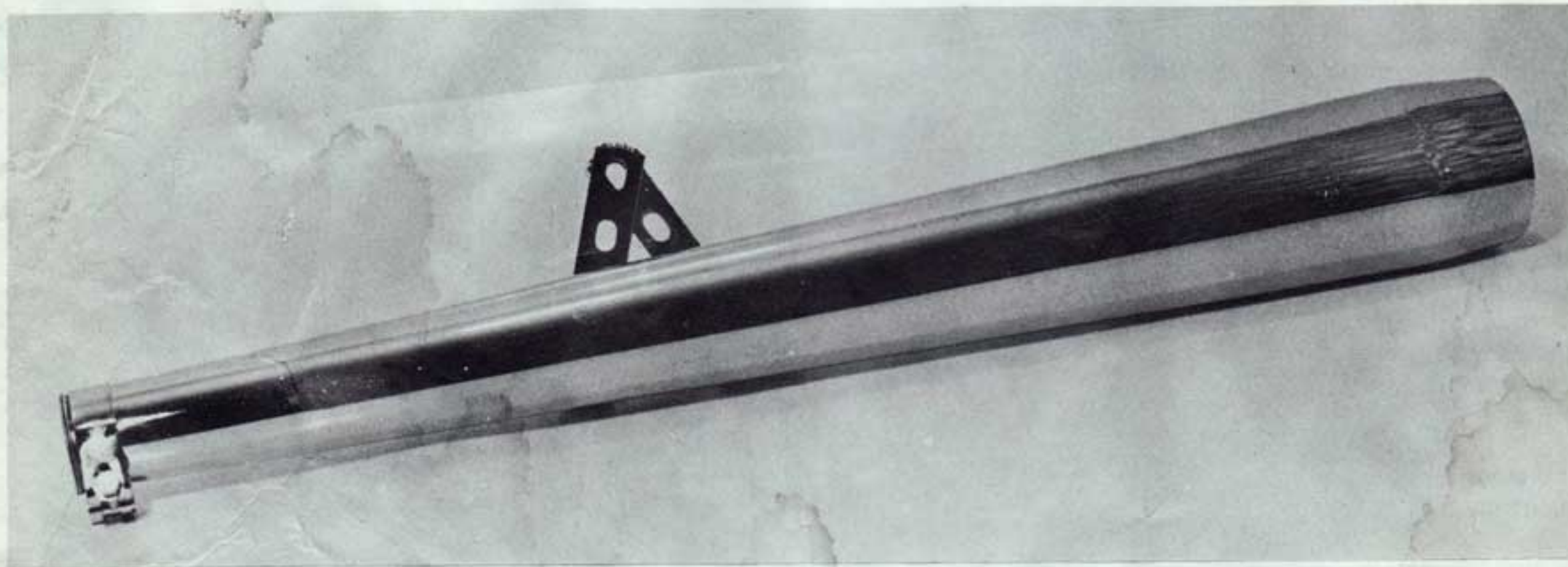
This Dunstall Yamaha Power System is absolutely complete with all brackets, nuts, bolts and clamps to fit straight on, utilising only the ring clamps off the stock Yamaha pipes. Thus in a very short time and with simple spanner work, you have a faster, prettier, healthier sounding motorcycle.



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## DUNSTALL DECIBEL SILENCER

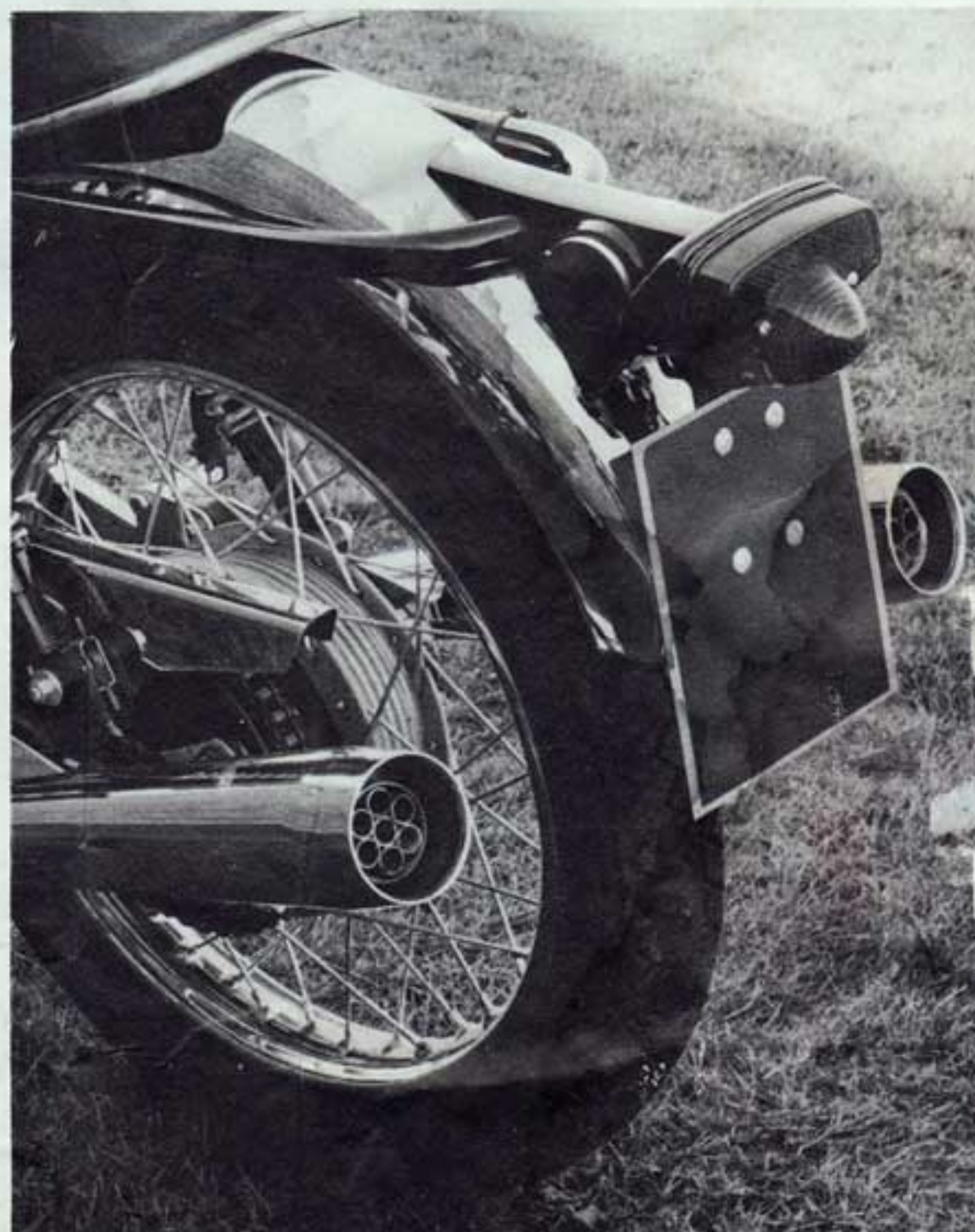
PART NUMBER 1134



The Dunstall Decibel Silencer is one of the worlds most famous silencers of all time. Whereas there are many silencers on the market which will indeed go on your bike, there is only one silencer that will do just that and more, namely, increase the performance with no other modification to the engine save a simple jet change in the carburettor. Numerous Dyno tests have shown them to give more performance, particularly mid range torque which is all important for acceleration. These silencers really do work and have been independently praised by tuning experts and magazines. Sufficient to say that the first pair of this present type were fitted to the record breaking 1968 TT winning production class Dunstall Norton. Since then we have steadily improved the noise absorption material so that these unique Silencers are now even more efficient. Full throttle tests on our own Nortons have produced decibel readings under the specified limits laid down by many countries. Often imitated, even by the big factories, none of them have achieved the same result as this the original. With its elegant styling and efficient performance (we keep its secret hidden patent 1063409) this Silencer will add a lot to any four stroke machine.

Note: Fitted to a Dunstall Norton 810 which was tested by 'Cycle' magazine they had this to say "At last a high performance exhaust system that honest to God muffles".

Supplied with fitting bracket and clamps and heavily chromed to fit 1.5/8", 1.1/2" and 1.3/8" exhaust pipes.

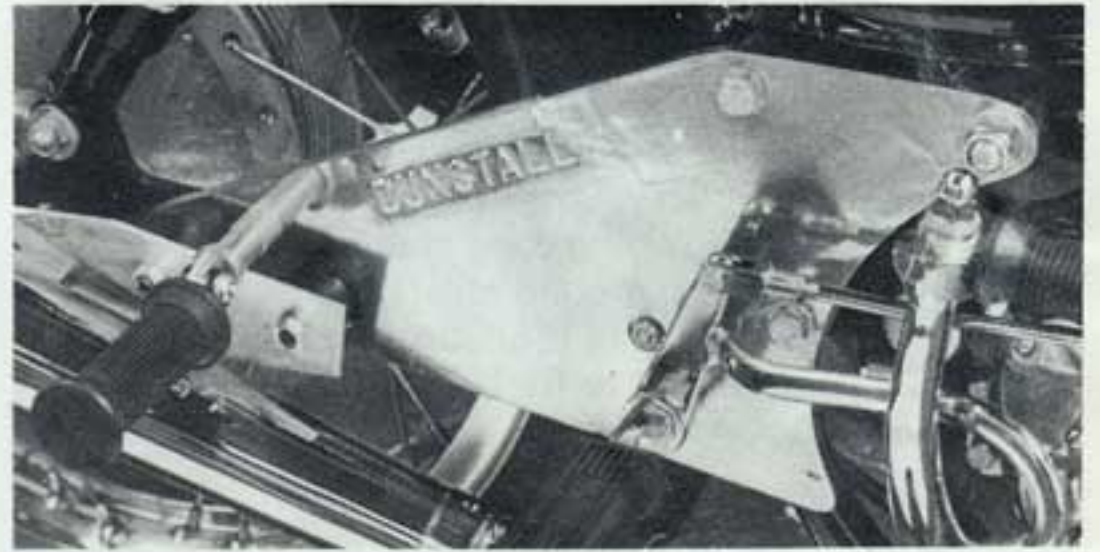




## DUNSTALL NORTON DURAL MOUNTS

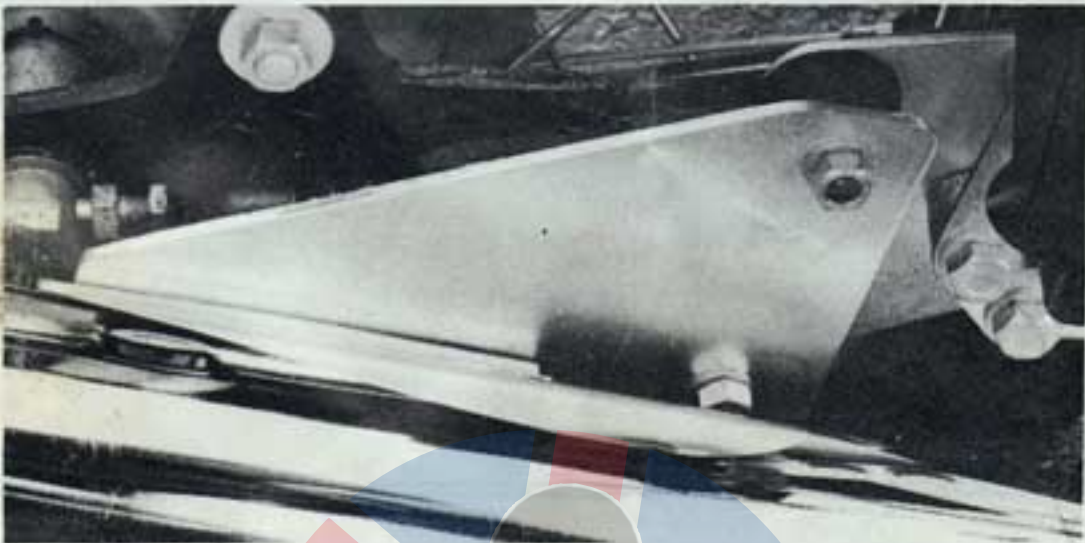
Part Number 1176

Special polished dural mounting plates which completely replace the stock mounts. They are supplied complete with plated steel brackets which provide the correct alignment of the silencers whilst still retaining the flexible rubber mounts. Supplied complete to fit the Norton Commando.



## DUNSTALL NORTON STEEL MOUNTS

Part Number 1174



Designed specially to suit our decibel silencers to the stock Commando alloy silencer plates. Should be used in conjunction with power exhaust system and decibel silencers. Manufactured from 14G steel plates, cadmium plated. Supplied in pairs.

## DUNSTALL TRIUMPH SILENCER MOUNTS

Part Number 1125

Strong steel plates, chromium plated, they locate Dunstall Decibel silencers onto the stock Triumph mounts. Intended for use with Triumph Power Exhaust System. Supplied in pairs.





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## DUNSTALL CENTRE STAND

Part Number 1156

Specially designed for use on 1971 and 1972 Norton Commandos. Fitted with our Dunstall Power Exhaust System. This complete new stand assembly has the advantage of being very easy to operate, at the same time providing good stability and it gives maximum ground clearance for cornering when not in use. Supplied as a complete assembly to fit 1971, 1972 and 1973 Commandos.



## EXHAUST RING NUTS

Part Number 1132



Manufactured from special material, light weight corrosion free.  
Suitable for all Norton 650s and 750s.



## DUNSTALL VALVE SPRINGS

Part Number 3055



Specially made from aircraft specification alloy steel, these extra wound valve springs are designed exclusively for the Norton engine. They will work perfectly in your Norton engine and are a must if you fit a Dunstall camshaft. Suitable for all 750cc and 650cc Nortons.

## HIGH CAPACITY MAIN BEARING

Part Number 3056

This special notched timing side main bearing has a far greater load capacity than standard. This is achieved by the use of finer tolerances and a special cage which uses 10 balls instead of the standard eight.



## FLEXIBLE ROCKER OIL FEED KIT

Part Number 3052



Supplies oil under pressure from the timing cover to the rockers. Manufactured from high pressure flexible tubing with special banjo unions. Available to fit Norton models 88, 99, 650, Atlas and Com.



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## DUNSTALL CYLINDER HEAD

Part Number 3098

This is a new Commando cylinder head modified as follows:

Re-sphered Inlet Valve  
Angle  $26\frac{1}{2}^{\circ}$  instead of  $28^{\circ}$ .

Larger Inlet Valves  $1\frac{5}{8}''$  in  
place of  $1\frac{1}{2}''$ .

Larger Inlet Ports  $1\frac{1}{4}''$  instead  
of  $1\frac{3}{16}''$ .

Inlet and Exhaust Ports  
Re-Shaped and Polished for  
maximum Gas Flow.

Bronze Hi-Dural Inlet Valve  
Guides.

Special Bronze Inlet Valve  
Seats.



This modification adds 4 to 5 bhp by increasing the efficiency of the engine and allowing the head to pass more fuel air mixture. It does not just improve top end power, the extra efficiency works right up the rev range improving acceleration and flexibility.

## COPPER HEAD GASKET

Part Number 3034

750 Nortons are a bit prone to blowing head gaskets and thus this special Dunstall accessory cures this problem completely. Made from pure copper and fully annealed it is perfectly sized to fit straight on and make a permanent seal.

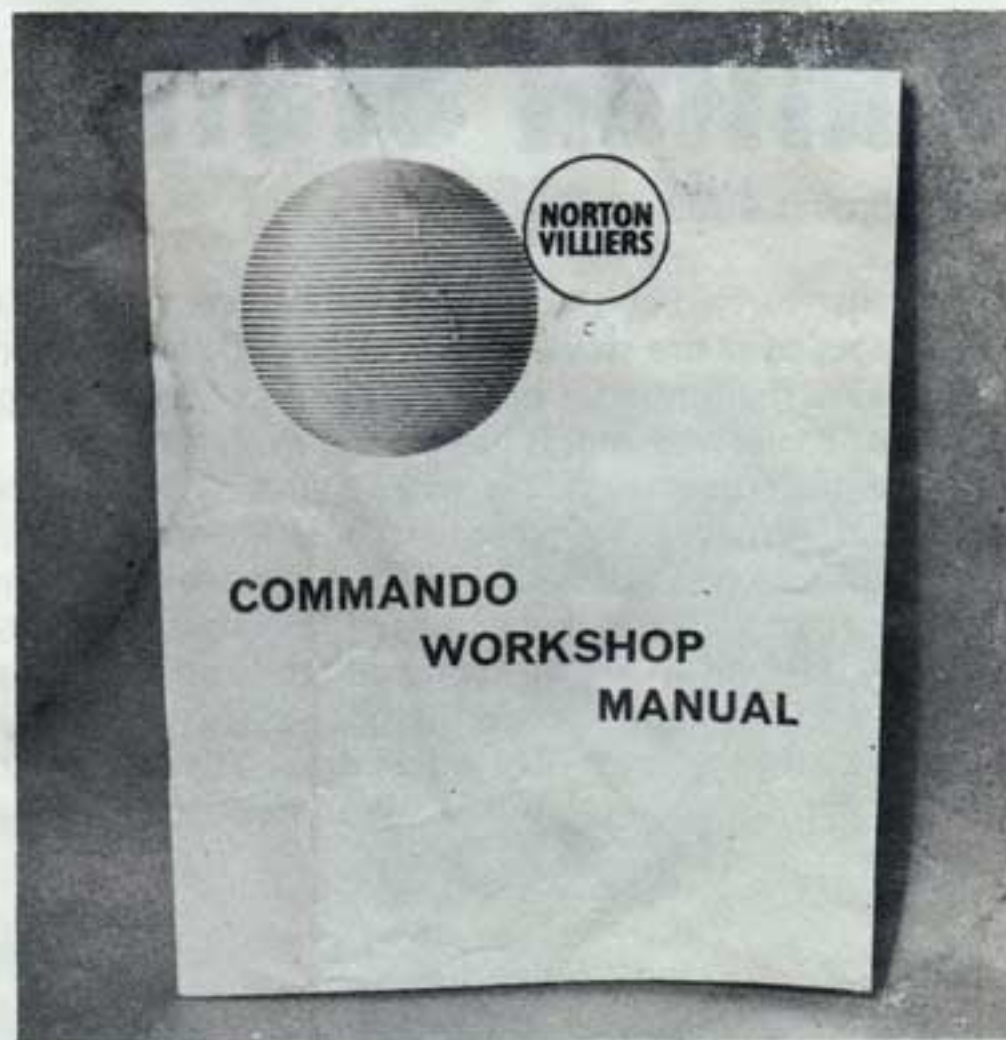




## WORKSHOP MANUAL

Part Number 1167

The genuine Norton Villiers Workshop Manual for Commandos. A complete 85 page book on good paper and with lots of photographs. It can save hours of wasted time if you do your own maintenance.



## GEARBOX SPROCKETS

Part Number 3067



One of the major design changes on the 750 Norton engine when it was reborn into the Commando was the changeover to a Triple Primary chain. This means of course that changing engine sprockets is out of the question and consequently the final drive sprocket has to be changed to affect the overall gearing. We now have these final drive sprockets in sizes 19 through 24 teeth. These fit the stock  $\frac{5}{8}$ " by  $\frac{3}{8}$ " chain and enable you to achieve the following choices of overall gearing:

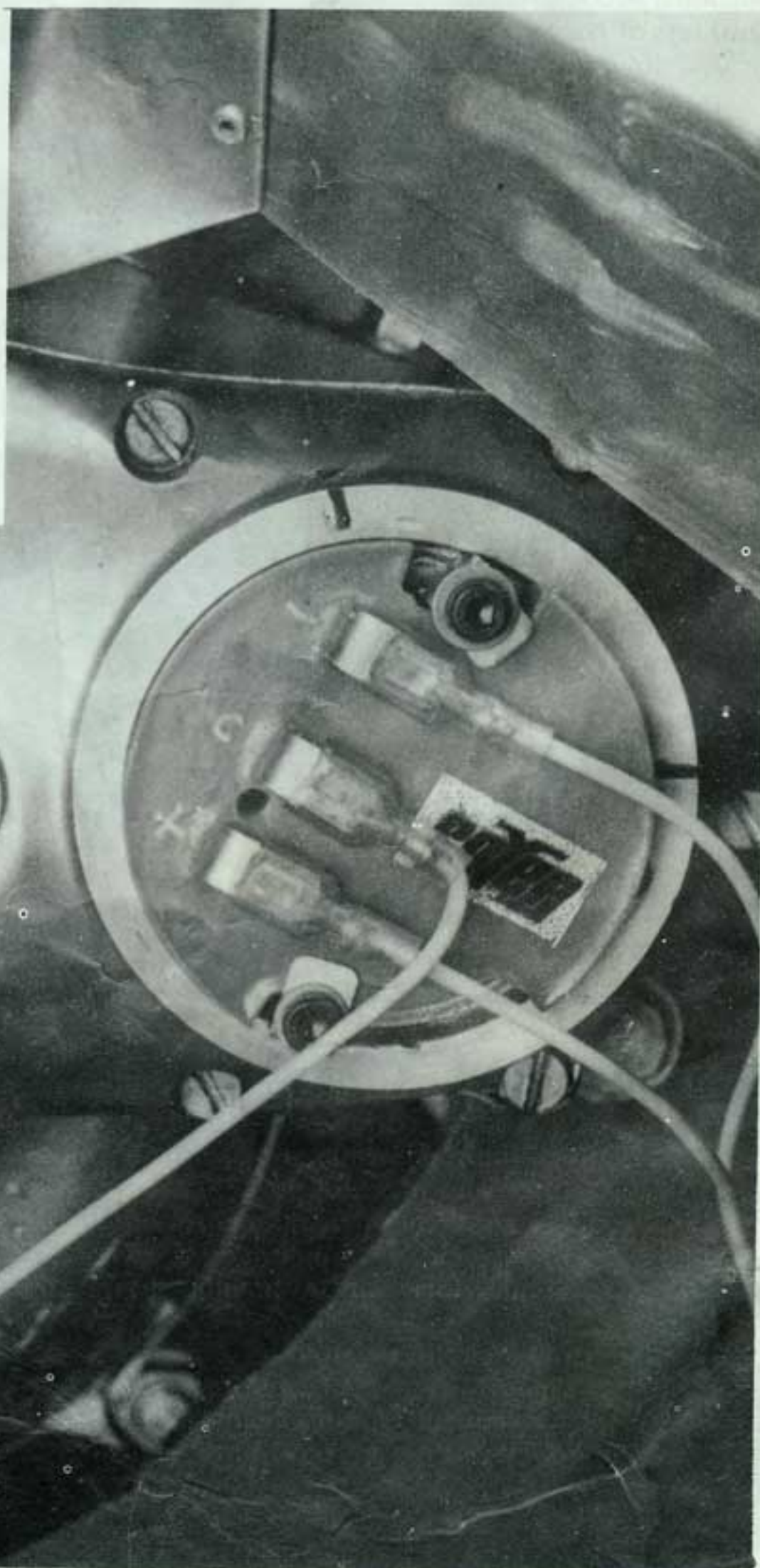
19T 4.84 to 1  
20T 4.56 to 1  
21T 4.38 to 1  
22T 4.15 to 1  
23T 3.97 to 1  
24T 3.81 to 1



## BOYER BRANSDEN TRANSISTORISED IGNITION SYSTEM

Part Number 4009

This transistorised contact less ignition system has many advantages over the stock set up. It absorbs less power, it requires no maintenance once set up, it produces a bigger spark for easier starting, it has a built in electronic advance mechanism and it is very reliable. The assembly consists of a rotor plate which replaces the stock cam, and A/R mechanism, a stator plate which replaces the points assemblies and a transistor amplifier. Magnets on the rotor plate produce a current in the sensor coils on the stator plate and this triggers the transistor amplifier. Used by many race teams throughout 1971 it has proven to be a very efficient ignition system. Available to fit Norton Commando and post '64 Atlas.



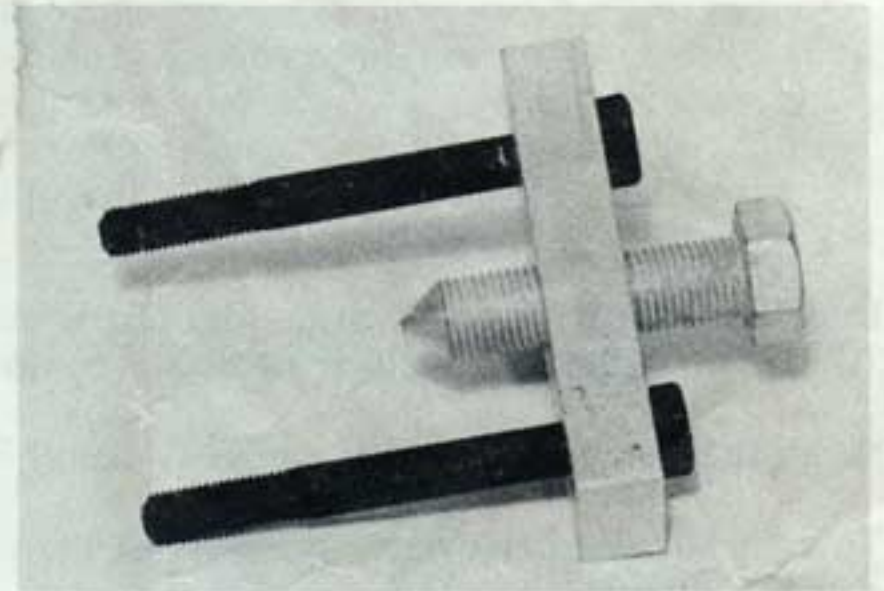


## WORKSHOP TOOLS FOR COMMANDO

### SPROCKET EXTRACTOR

Part Number 3105

This extractor assembly is essential for removing the engine sprocket on Norton Commandos.



### CLUTCH EXTRACTOR

Part Number 3106

This clutch tool enables you to remove the spring circlip which is necessary if the clutch is to be removed.



### TIMING PINION EXTRACTOR

Part Number 3101

This tool is essential for removing the timing pinion from the mainshaft on all Norton models, Commando, Atlas G.15, P.11, 650, 88 and 99.





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## DUNSTALL GEAR RATIO & MAXIMUM SPEED CALCULATOR

Part Number 1170

Do away with all guesswork, How fast is your bike at 7000 rpm? What gear ratio is necessary to do 130 mph?

What difference will a larger sprocket make?

This pocket sized calculator provides all the answers quickly and accurately.

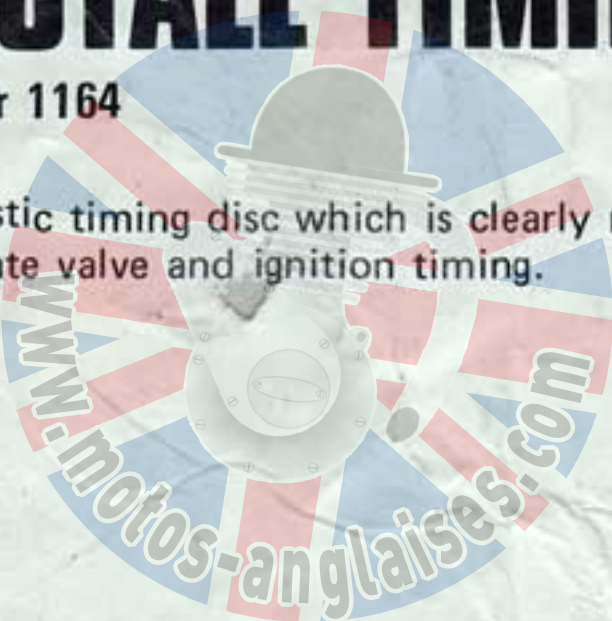
Made from 5" diameter white PVC it comes in a transparent wallet. Full easy-to-follow instructions are supplied.



## DUNSTALL TIMING DISC

Part Number 1164

A white plastic timing disc which is clearly marked to ensure really accurate valve and ignition timing.





## GENUINE NORTON AND HONDA PARTS AT SPECIAL REDUCED PRICES

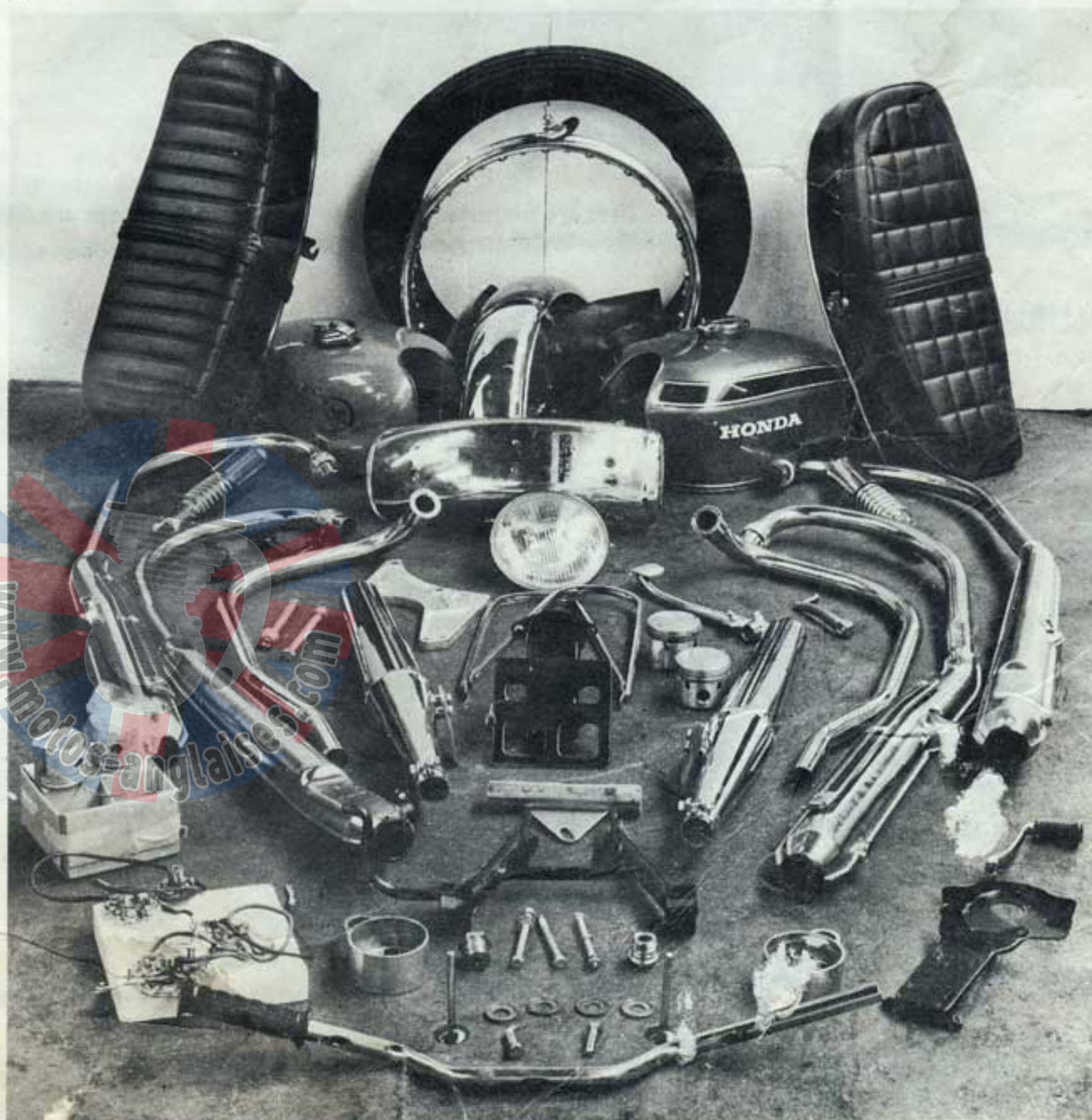
In the course of building our Dunstall Norton and Dunstall Honda machines a limited number of the following brand new stock parts become available at drastically reduced prices.

### Norton Parts

- Pairs of Exhaust Pipes
- Pairs of Silencers
- L/H Footrest Assembly
- R/H Footrest Assembly
- Petrol Tank
- Seat
- Front Disc Brake Assembly
- Front Mudguard

### Honda 750 Parts

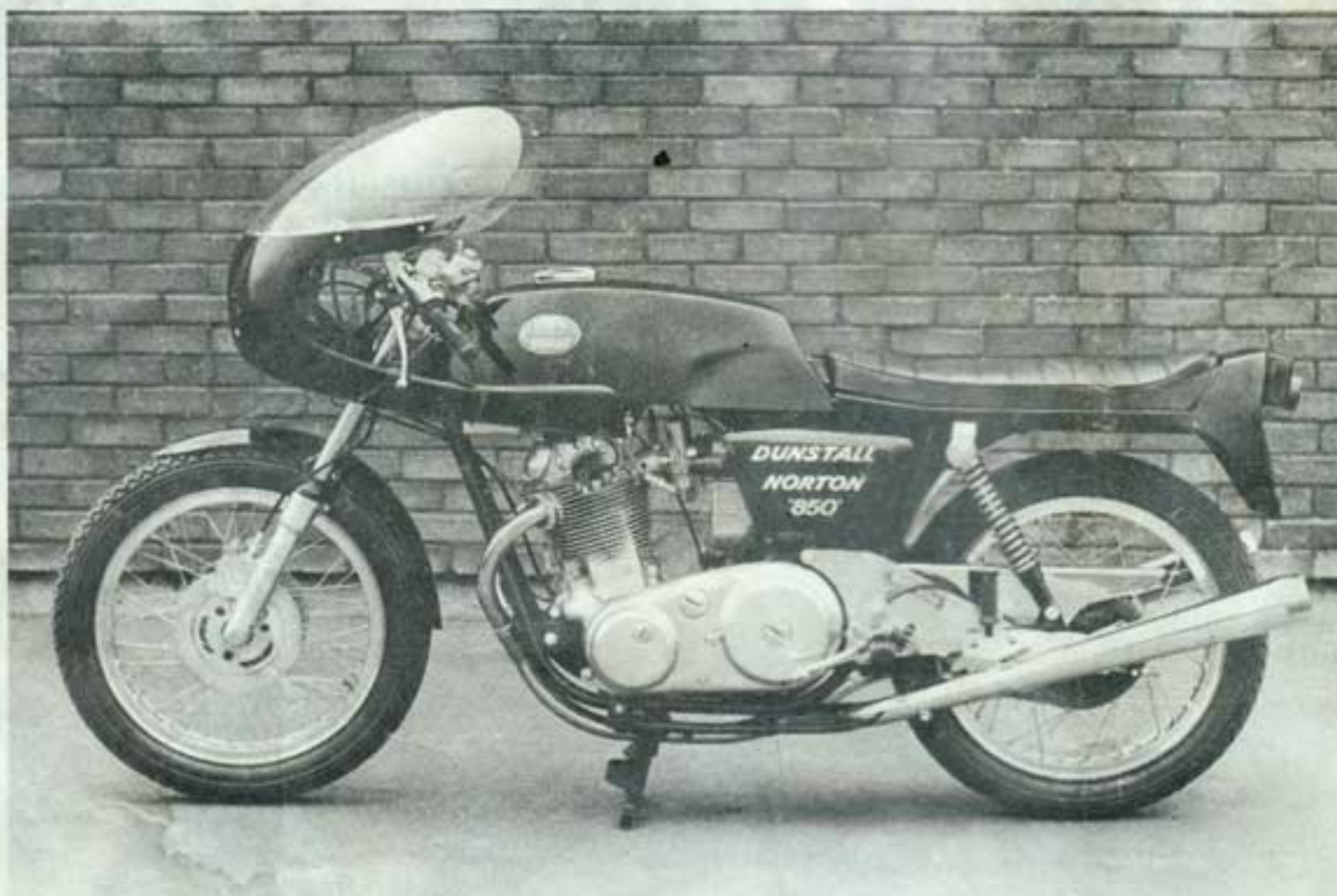
- Sets of Exhaust Systems complete
- Tanks and Seats
- Footrests and Controls
- Front Mudguard





# Dunstall equipment

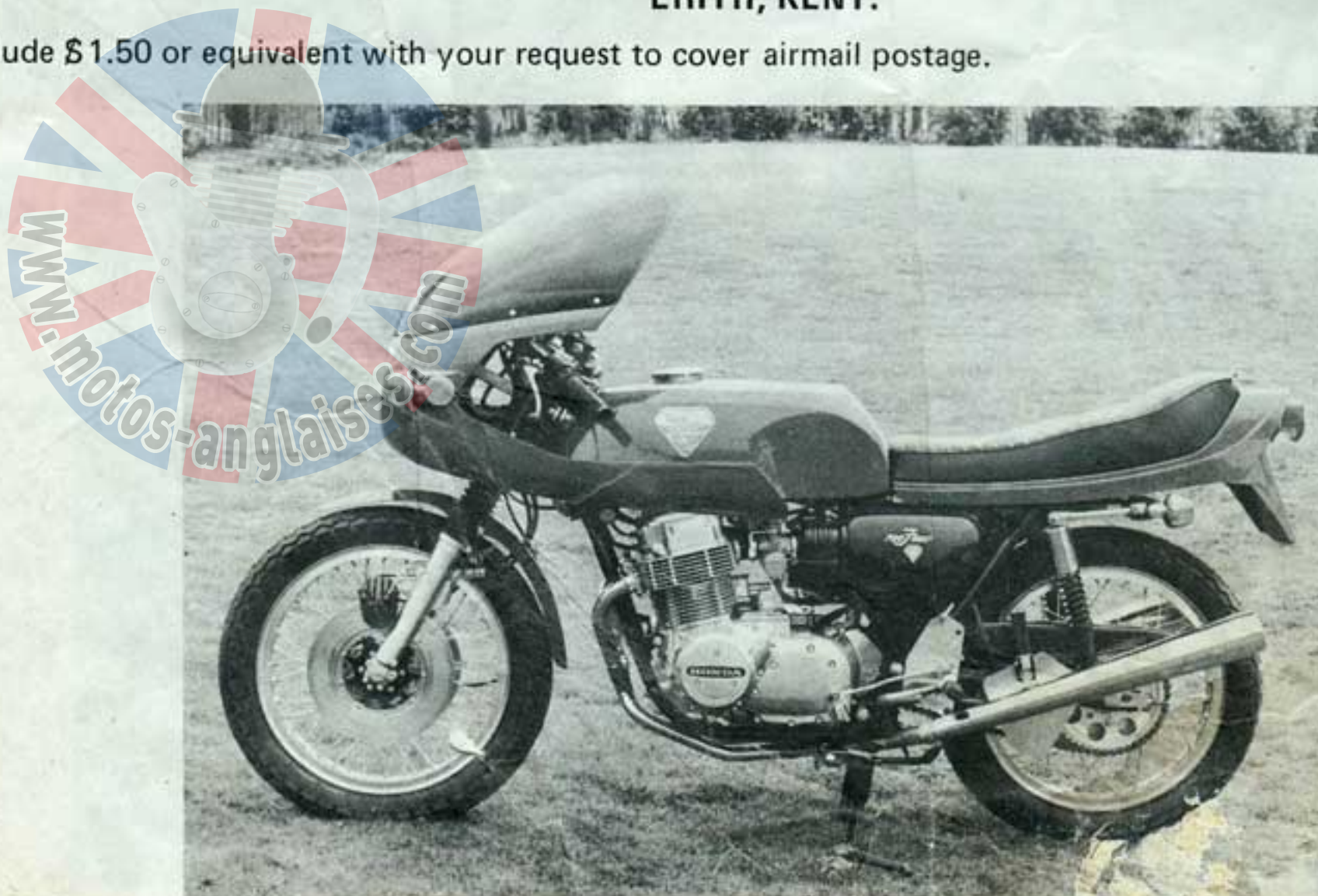
## DUNSTALL MACHINES



Illustrated here are just two of the complete machines that are manufactured by Paul Dunstall. There are many other models available and full details are included in the Dunstall Machine Catalogue which is available direct from:

**PAUL DUNSTALL ORGANISATION LTD.  
CRABTREE MANORWAY,  
ERITH, KENT.**

Please include \$1.50 or equivalent with your request to cover airmail postage.





## VISITORS GUIDE

Paul Dunstall Organisation is now located in Belvedere which is on the border between London and Kent. To the South East of Central London.

### BY AIR (from Heathrow)

Take the Airport Bus to the West London Air Terminal, it is a regular service and the bus leaves from right outside the airport arrivals door. Take a taxi from the Air Terminal to Charing Cross Station (approximate distance two miles).

### BY TRAIN (from London)

Take a train from Charing Cross or Waterloo or London Bridge to Belvedere Station. Trains run every twenty minutes, more frequently during rush hour periods. The train journey usually takes between 25 to 30 minutes. At Belvedere Station you will notice a Dunstall sign with map showing where we are located (approximately 500 yds from station).

### BY ROAD (from London)

Follow the signs for the A2 signposted to Dover. Approximately 7 miles out from Central London the A2 crosses the South Circular Road, turn left onto the South Circular Road and follow the signs to Woolwich and Woolwich Ferry. Just before Woolwich you will pass the Military Academy, just after the Academy you turn right at a set of Traffic Lights into Wellington Street. Follow this road for 3 miles, through

Woolwich and Plumstead and up Bostall Hill. After the top of the hill take the 7th turning on the left into Picardy Road. There is a church on the opposite corner. At the end of Picardy Road turn right into Lower Road. 350 yards along on the left is Crabtree Manorway.

### BY ROAD (from Dover)

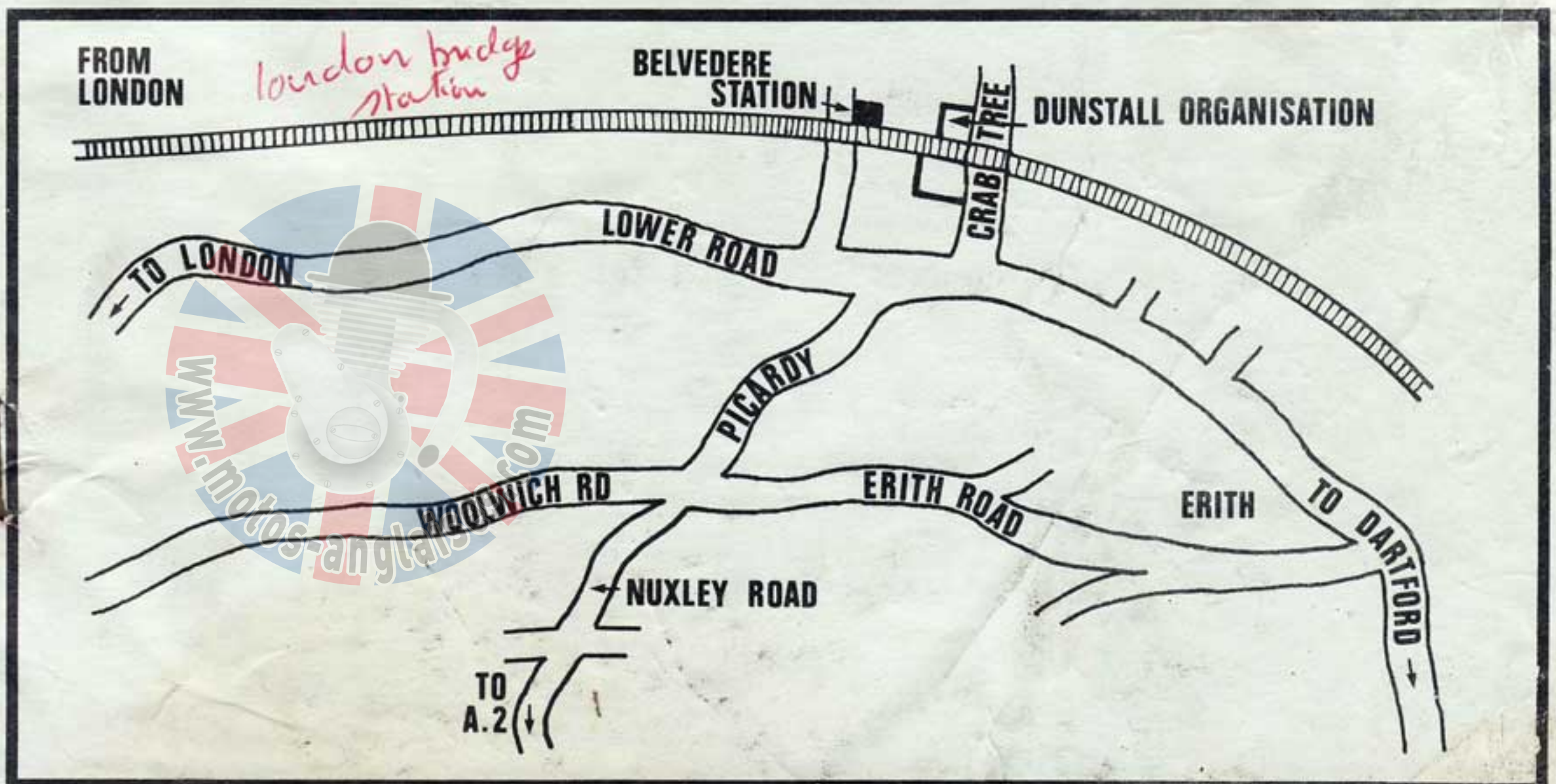
Follow the main signposted route along the A2 towards London. Approximately 17 miles from London turn off the A2 (M2) at the Black Prince Junction, signposted to Bexley. Follow the signs towards 'Erith'. In Erith follow the signs towards 'Thamesmead' which takes you along the Lower Road. Approximately 1½ miles from Erith Centre you will find Crabtree Manorway, a turning on the right hand side of the Lower Road.

### Hours of Business.

Monday to Friday 9 a.m. to 5.30 p.m.

Saturday 9 a.m. to 2 p.m.

Sunday Closed all day.



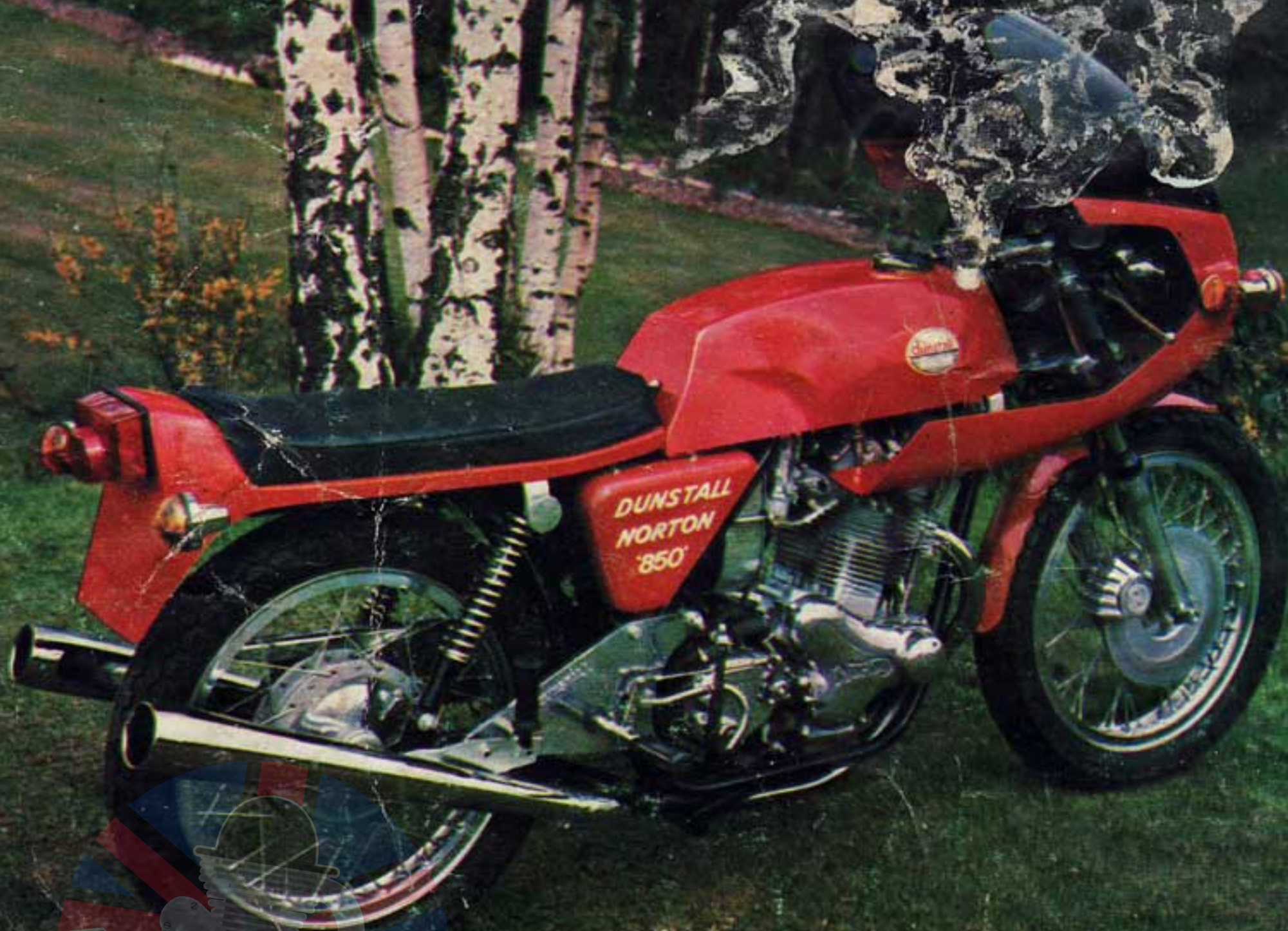
**Paul Dunstall Organisation Limited**

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Telex 89 6000. Cables Dunstall Belvedere



# Our installed equipment



PAUL DUNSTALL ORGANISATION LTD

DUNSTALL EQUIPMENT STOCKIST

