



1934
MODELS

PANTHER

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FOREWORD

The will to make the Panther motor cycle supreme in the world's markets backed by the experience and machinery necessary for the purpose, account for continually increasing sales.

Panther machines are exceptionally fine to look at, go extremely fast, handle delightfully, and will outwear any machine in existence.

We hope you will buy a Panther, and if you do we know you will buy the best.

Ask the man who owns one.

PANTHER DE LUXE EQUIPMENT

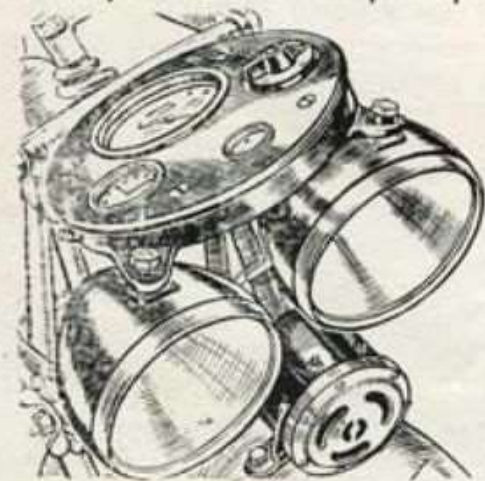
Car Illumination on a Motor-Cycle.

This system, which is obtainable on no other motor cycle, is only fitted to Models 100, 90, 60 and 50, the forks being specially built for the purpose.

It provides a luxurious, intensely practical and trouble-free illuminating system which has stood the test of three seasons' use and is strongly recommended.

The necessary power output for the high efficiency lamps is provided by a special 50 Watt Miller dynamo, housed in a bracket built into the frame, and is driven by a silent duplex chain automatically lubricated and fully enclosed.

The dip and swivel lamp is operated by the left-hand twist grip and the right-hand lamp is automatically switched out at the same time.



The swivelling apparatus enables the lamp to be turned round so that it will pick out the edge of the road, and enable the machine to be driven safely during the thickest fog.

The system incorporates a stop light, operated by the back brake pedal. The instruments in the panel are internally illuminated.

The operation can be reversed for countries where right-hand drive is the rule.

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PREDOMINANT PANTHER FEATURES

500/600 c.c. Redwings and Specials.

Cushion grip tank with shock-absorbing sunk-in knee pads. Eleven inches of perfect fitting grip. Water deflector formed at rear.

Self-lifting back stand operated with exceptional ease. Springs up automatically against rubber buffers and is therefore noiseless.



Tank Cushion Knee Grip

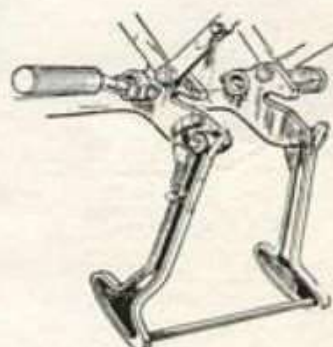
Hand adjustment of inter-connected brakes ensures skidless control. Balanced leverage gives that progressive action so necessary for safety.

Back brake connection can be sprung out instantly by hand. The cam chain adjusters are fixed on spindle and it is therefore only necessary to remove the mud guard tail piece and the spring clip chain link in order to roll out the back wheel.

Mud and water excluding aluminium oil-tight chain case with large filler. Front half removable without disturbing foot rest or exhaust pipe.

Immense frame strength and lack of vibration ensured by unique engine mounting. Specially designed to simplify decarbonisation. Comfortable pillion riding ensured by special toolbags, valanced rear guard, and hinged foot rests fitted to built in frame lugs.

Disposition of low mounted saddle, wide range of foot rest adjustment and handle bars, provide ideal riding position. 5 in. ground clearance. Accessible oil filler.



Stand

250/350 c.c. Redwings.

These machines fulfil the modern demand for lightweight high efficiency motor cycles, and this has been achieved without any sacrifice of sturdiness or long life—characteristic Panther qualities.

Note the die cast finned crank-case-cum-sump—a fine example of modern British engineering.

The difficulties of designing automatically lubricated valve guides and pressure feed to the over-head rockers, have been brilliantly overcome.

Performance, steering, and accessibility conform to the highest standards.

PRICES

MODEL 100	...	598 c.c. REDWING	...	...
		(Codeword MAGRED)		
.. 90	...	490 c.c. REDWING	...	...
		(Codeword MAGWING)		
.. 60	...	598 c.c. SPECIAL	...	...
		(Codeword CUBRANTH)		
.. 50	...	498 c.c. SPECIAL	...	...
		(Codeword CUBPAN)		
.. 80	...	348 c.c. REDWING	...	...
		(Codeword PANRED)		
.. 70	...	248 c.c. REDWING	...	...
		(Codeword PANCUB)		

EQUIPMENT

De luxe equipment, viz., twin lamps, Panther Klaxon horn, speedometer, license holder, and stop lamp	Models 50, 60, 90, 100	...
Standard equipment, viz., single lighting, Panther Klaxon horn, and license holder	Ditto	...
30 Watt Lucas Maglita, with horn, and license holder	Model 80	...
20 Watt Ditto	Model 70	...
Extra for Panther Klaxon horn	Models 70 & 80	...
Smith's Chronometric Speedometer	All models	...
8 Day Clock	Ditto	...
Pillion Cushion	Ditto	...
Carrier	Ditto	...
Cream and green finish	Ditto	...
Folding Pillion Footrests	Models 70 & 80	...
Ditto, ditto, ditto	Models 50, 60, 90, 100	...
Leg-Guards for upswept pipes	All Models	... per pair
Panther Mascot	Ditto	... each

All prices and specifications are subject to alteration without notice.

SPECIFICATION of 500 c.c. and 600 c.c. Redwings

ENGINES.—Built into frame by four-bolt fixing combining great accessibility and ease of removal of head for decarbonising.

ENGINE LUBRICATION.—By Panther internal rotary pump. Construction of crank case with integral sump ensure constant circulation and embodies the following special features.

1. Main supply to back of piston, giving piston spread lubrication.
2. Direct feed to cams and cam levers.
3. Force feed to rocker shafts and both valve guides.
4. Supplementary extra feed to inlet rocker spindle.
5. Day or night tell-tale.
6. Pump adjustment from saddle when riding.
7. All oil pumped through fine gauze filter, which is readily removable.

ENGINE DETAILS.—Roller bearings to main shafts. Double roller big end, $\frac{1}{4}$ " fully floating hollow gudgeon pin with circlip fixing, anti-slap alloy piston $3\frac{1}{4}$ " long.

CYLINDERS.—Built-in oil feed to piston and cast with specially designed fins to ensure uniform heat distribution and consequent lack of distortion.

ROCKER MECHANISM.—Inlet and outlet valves of exceptional diameter and length with large bronze bearings—quiet

MODELS



MODEL 100 REDWING.

598 c.c. 87 x 100. B.H.P. 26 at 5,000 R.P.M. Compression ratio 6.5. Gear ratios 4.3, 5.8, 7.3, 11.5. Wheel base 54½". Weight 353 lbs. Petrol 90 m.p.g. Oil 1,500 m.p.g. Tax £3.

Price with equipment, as illustrated

MODEL 90 REDWING.

490 c.c. 79 x 100. B.H.P. 25 at 5,000 R.P.M. Compression ratio 6.5. Standard gear ratios 4.6, 6.3, 7.8, 12.3. Remaining details as Model 100.

Price with equipment, as illustrated



MODEL 60 SPECIAL.

598 c.c. 87 x 100. B.H.P. 23 at 4,500 R.P.M. Compression ratio 6.5. Weight, petrol and oil consumption as Model 90. Standard gear ratios, same as Model 90. Remaining details as Model 90.

Price with equipment, as illustrated

MODEL 50 SPECIAL.

in operation. Lubricated by direct feed from pump. Push rods enclosed in steel tube. Internal valve lifter with special leverage giving finger-light operation.

- TIMING GEAR.**—Car type one piece camshaft. Journal bearings in cover plate ensure friction-free rigidity for main and cam shafts. Decompressor ensures easy starting.
- FORKS.**—Special Webbs of immense strength with large diameter girders. Fully enclosed hand adjusted shock absorber and steering damper fitted. Lamp fixing lugs built into fork. Rock steady steering at all speeds.
- HANDLEBARS.**—Specially shaped to suit saddle and general riding position. Adjustable for height and angle. Twist grip throttle and built-in controls. Heavy cables for all operations.
- CARBURETTOR.**—Amal. Large bore type giving maximum efficiency.
- SADDLE.**—Terry de Luxe mounted on long supple springs in such a manner as to eliminate bottoming on rough roads.
- TRANSMISSION.**—Primary chain $\frac{1}{2}$ " \times .305. Totally enclosed in aluminium oil bath chain case. Rear chain $\frac{3}{8}$ " \times $\frac{3}{8}$ ". Quick adjustment by cams on rear spindle ensure permanent wheel alignment. Shock absorber cush hub incorporated in back hub.
- GEAR BOX.**—Burman four speed with totally enclosed foot starter and one shot foot control. Gear ratios 4.3, 5.8, 7.3, 11.5.
- WHEELS.**—3.25 \times 19. Fitted large ball journals requiring no adjustment. Front hub has provision for internal speedometer drive.
- MAGNETO.**—B.T.H. with direct drive from timing case through universal joint coupling.
- BRAKES.**—Inter-connected and cable operated through steel tubing. Quickly detachable by hand ensuring rapid wheel removal. 7" front; 8" back. With independent hand adjustments.
- MUDGUARDS.**—Of large dimensions, giving full protection. Rear mudguard deeply valanced and rear portion, together with number plate, quickly detachable to facilitate wheel removal.
- STANDS.**—Stout front stand forming rigid brace to mudguard. The rear stand is of the spring up type with cam action feet. Rubber buffers fitted, making silent in operation. The unique design makes it possible to operate without effort.
- TOOL PANNIERS.**—Of large dimensions, specially shaped and stoutly supported.
- TANK.**—2½ gallons capacity. Chromium finish with enamelled panel, and transfer. Special housing for knee grips. Large accessible filler cap, reserve petrol tap and patent water deflector.
- FINISH.**—Standard finish black, and chromium rims with enamelled centres. (See extras for alternative finish.)
- ELECTRIC LIGHTING.**—(Extra.)—High output dynamos housed in special lug formed on frame. Dynamo driven by silent Duplex chain from sprocket formed integral with magneto coupling. Fully enclosed and automatically lubricated. Accumulator mounted vertically on substantial platform and readily removable.

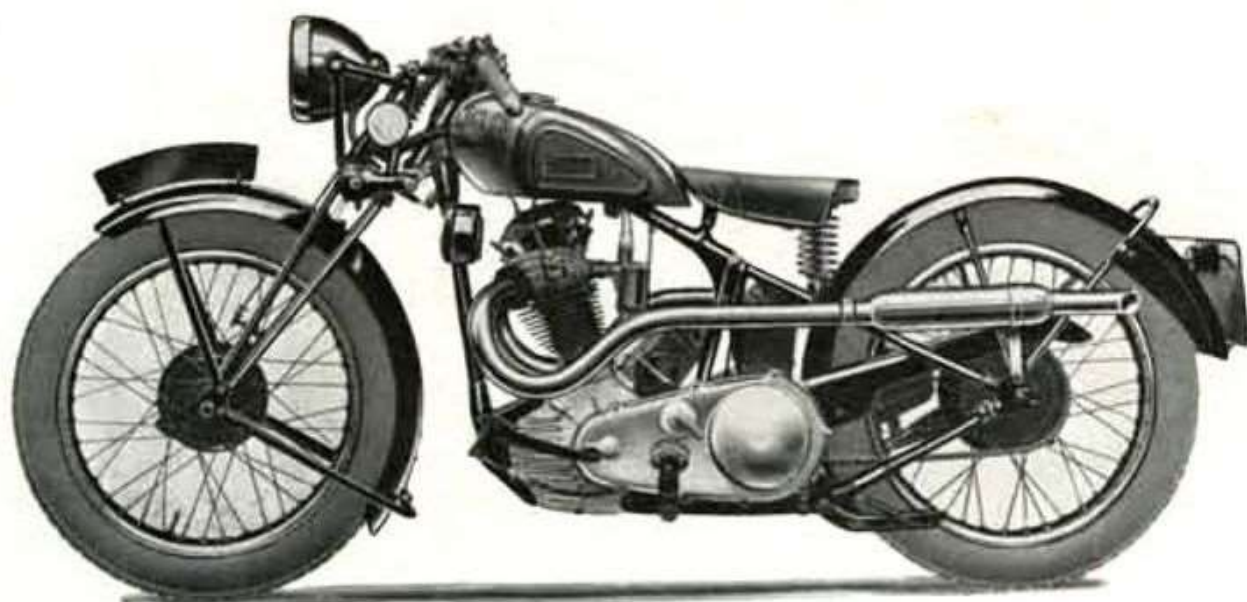
SPECIFICATION of 500 c.c. and 600 c.c. Specials

The general specification is identical to that of the 500 and 600 c.c. Redwings with the exception of the power unit. The engines of these models have a lower compression ratio and different design of combustion head and valve gear. They are particularly suitable for heavy duty solo or side-car work. (See opposite for engine details.)

SPECIFICATION of 250 c.c. and 350 c.c. Redwings

- ENGINES.**—Rigidly mounted in a conventional manner, but having exceptional ground clearance and accessibility.
- ENGINE DETAILS.**—Double row big end. $\frac{3}{4}$ " fully floating gudgeon pin. Roller bearing crank shaft. Heavily finned sump integral with die cast crank case. Lubrication by Panther pump as on larger models. Ignition and lighting by Lucas Maglita, gear driven at engine speed. Valve guides $2\frac{1}{4}$ " long, automatically lubricated. Rocker spindles lubricated by direct feed from pump. Other engine details and timing gear as on 500/600 c.c. Redwings.
- FORKS.**—Special Webb with hand adjusted shock absorbers and built-in steering damper. Lamp fixing lugs built into fork. Superb steering at all speeds.
- HANDLEBARS.**—Specially shaped to suit saddle and general riding position. Adjustable for height and angle. Twist grip throttle and built-in controls. Heavy cables for all operations.
- CARBURETTOR.**—Amal.
- SADDLE.**—Lycetts Model 70/80. Mounted on long supple springs giving ample movement without bottoming.
- TRANSMISSION.**—Primary and driving chains $\frac{1}{2}$ " \times .305. Primary chain totally enclosed in aluminium oil bath chain case. Rear chain quickly adjusted by cams on rear spindle ensuring permanent wheel alignment. Transmission shock absorber incorporated in clutch.
- GEAR BOX.**—Burman four speed pivoting type. External screw adjustment for primary chain. One shot foot control. Gear ratios see opposite.
- WHEELS.**—Fitted with journal bearings front and rear. 25 \times 3.25 Model 70. 26 \times 3.25 Model 80. Front hub has provision for internal speedometer drive.
- IGNITION.**—Lucas Maglita, with direct drive inside timing case.
- BRAKES.**—Rear brake cable operated by pedal on left-hand side.
- MUDGUARDS.**—Large dimensions giving full protection. Rear mudguard deeply valanced and hinged to facilitate rear wheel removal.

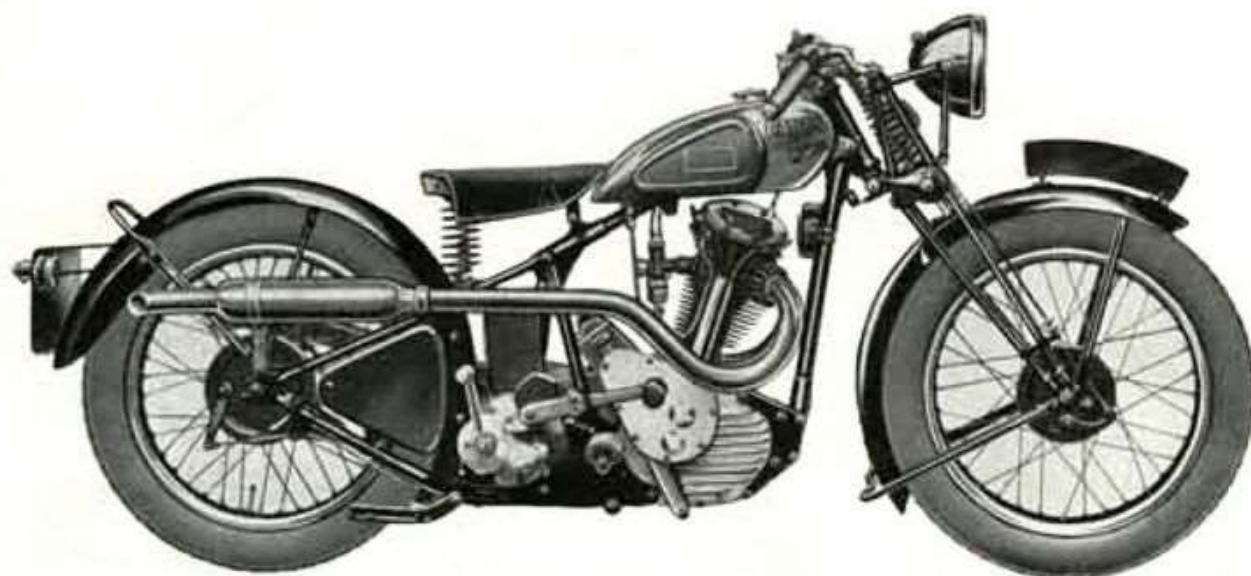
equipment, as illustrated



MODEL 80 REDWING

348 c.c. 71 × 88. B.H.P. 18 at 5,500 R.P.M. Compression ratio $7\frac{1}{2}$ to 1. Standard gear ratios 5.4, 7.5, 9.6, 16.0. Wheel base 54". Tyres 26 × 3.25. Brakes 6" front, 7" rear. Petrol 100 m.p.g. Oil 2,000 m.p.g. Weight 275 lbs. Tax £3.

Price with equipment, as illustrated



MODEL 70 REDWING.

248 c.c. 60 × 88. B.H.P. 14 at 5,500 R.P.M. Compression ratio $7\frac{1}{2}$ to 1. Standard gear ratios 5.7, 7.9, 10.2, 16.9. Wheel base 54". Tyres 25 × 3.25. Brakes 5" front, 6" rear. Petrol 110 m.p.g. Oil 2,000 m.p.g. Weight 250 lbs. Tax 30s.

Price with equipment, as illustrated

FRAME.—Straight tubes throughout giving exceptional strength. Duplex saddle tubes with unique battery mounting platform. Wheel base 54".

STANDS.—Tubular front stand and central stand for rear wheel so placed as to ensure ease of operation.

TANK.—Of pleasing shape. 2 gallons Model 70. $2\frac{1}{2}$ gallons Model 80. Chromium finish with enamelled rear panel. Special housing for large comfortable knee grips. Large size filler cap. Fitted with reserve petrol tap and patent water deflector.

FINISH.—As on 500/600 Redwings.

ELECTRIC LIGHTING.—(Extra.) By Lucas Maglita 20 Watt Model 70, 30 Watt Model 80.

TOOL PANNIER.—V shape metal case substantially mounted on rear forks.

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GUARANTEE

Any part or parts of the Motor Cycle which may be or become defective through faulty material or workmanship will be repaired or a new part or parts supplied in exchange free of charge provided such part or parts is or are before the _____ day of _____ 19____ sent carriage paid to PHELON & MOORE LTD., CLECKHEATON, YORKS, and provided also that the numbers stamped on the crank case of the machine from which the part or parts is or are taken is supplied at the same time.

This Guarantee shall not apply to Tyres, Saddles, Lamps, Bags, Horns, Electrical Fittings, or any articles not manufactured by PHELON & MOORE LTD., and is likewise excluded where the defects are caused by misuse or neglect or in cases where the goods of PHELON & MOORE LTD. have changed hands or have been let out on hire.

All other Guarantees, Representations, Warranties or Conditions whether expressed or implied and whether statutory or otherwise and every liability (if any) for consequential damage by reason of any defect latent or otherwise are and is hereby expressly excluded and the Owner shall be deemed to waive the same accordingly.

The Guarantee expires twelve months after despatch of the machine from the Works, and the full six months guarantee therefore only applies in the case of machines which have not been in stock at Agents for a period of more than six months.

NOTE.—This Guarantee is issued to every buyer on receipt of the card duly filled in. This card is placed in the sealed tool bag of every machine.

Sidecars

Panther side-cars are manufactured by the Swallow Coachbuilding Company, and full particulars will be sent on request.

Hire Purchase

There are no restrictions on the hire purchase terms under which Panther motor cycles can be sold.

London Service

Messrs. George Clarke (Motors) Ltd., of 278, Brixton Hill, S.W.2, and 275, High Street, Acton, W.3, carry a full stock of spare parts, and undertake the servicing of Panther machines in London and the south of England. This Company specialise in part exchange business.

Lubricants

Prices Motorine B de luxe is recommended for all our engines, and Belmoline C or D for the gear boxes.

Export

Machines are despatched for the Continent of Europe in crates at a cost of _____ each, and Overseas in closed cases at a cost of _____ each.

Publications

"The Book of the P. & M.", price _____ containing full particulars of all P. & M. models manufactured for the past ten years, with instructions for maintenance, can be obtained direct from us or through any of our Dealers.

1st November, 1933.

PHELON & MOORE LTD.,

London Depot: 324, Regent Street, W.1

Telephone: LONDON, Langham 2850.

Telegrams: Phelmor, Wesdo, LONDON.

Works: CLECKHEATON, YORKS.

Telephone: CLECKHEATON 129.

Telegrams: Geared CLECKHEATON.