

Humber

MOTOR
CYCLES
1914



BARNSTORMERS.CO.NZ

COLONIAL EDITION

Humber

Limited

REGISTERED OFFICES AND WORKS :

COVENTRY.

Telephone:
522 COVENTRY.

Telegrams:
"HUMBER, COVENTRY."

DEPÔTS :

London :

32 HOLBORN VIADUCT, E.C. - -

60-64 BROMPTON ROAD, S.W. - -

LONDON REPAIR WORKS :

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1981
Kensington.

1298 and 1299
Willesden.

TELEGRAMS :

"Humber,
London."

"Humbertie,
London."

"Humberonia,
London."

"Humber,
Southampton."

Agents in all parts of the United Kingdom and all the
principal Cities of the World.

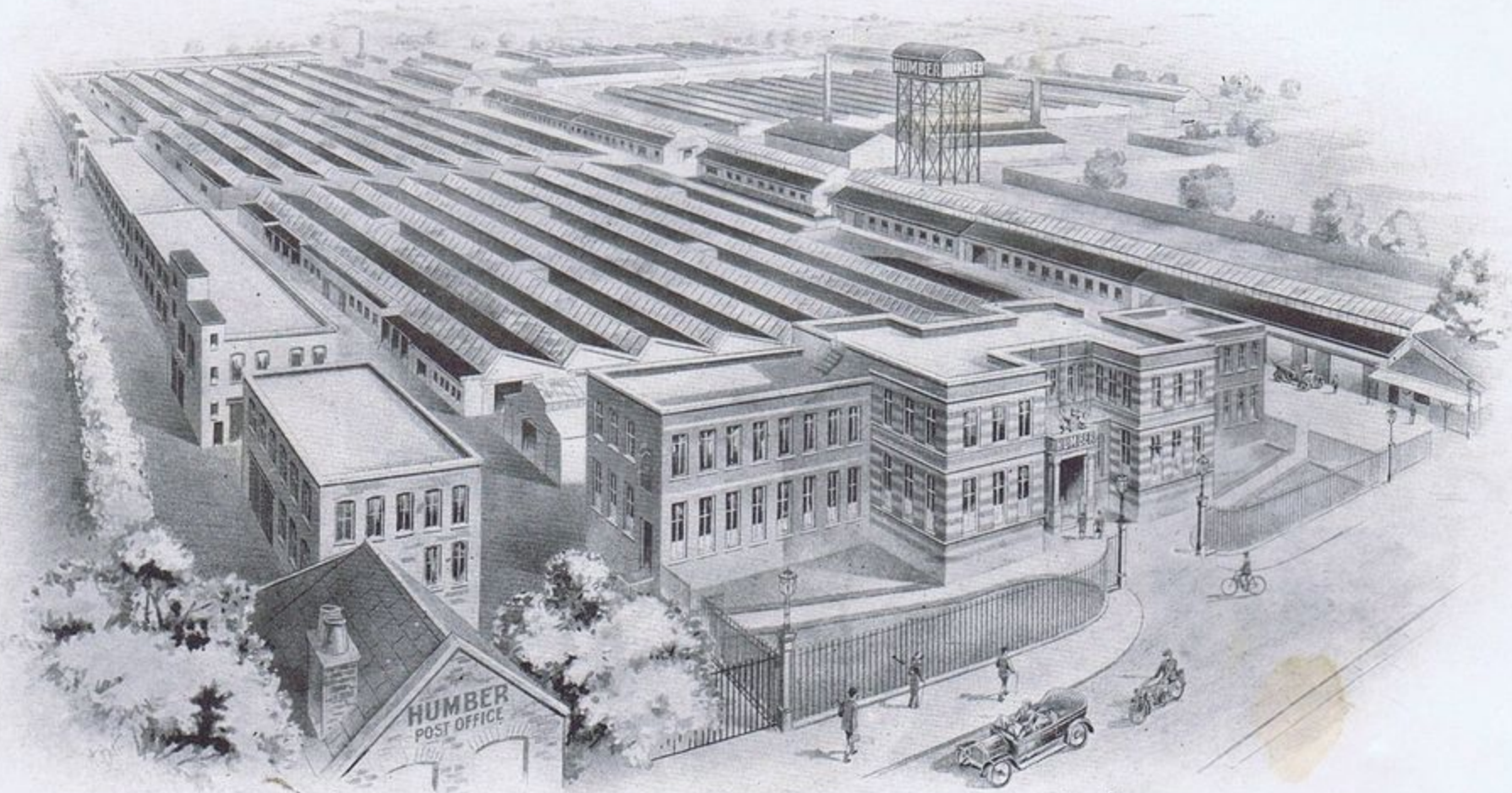
Cable Codes :

A B C (4th and 5th Editions) and A 1.

All previous Lists cancelled

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Humber Works



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which cover an area of 22½ acres.

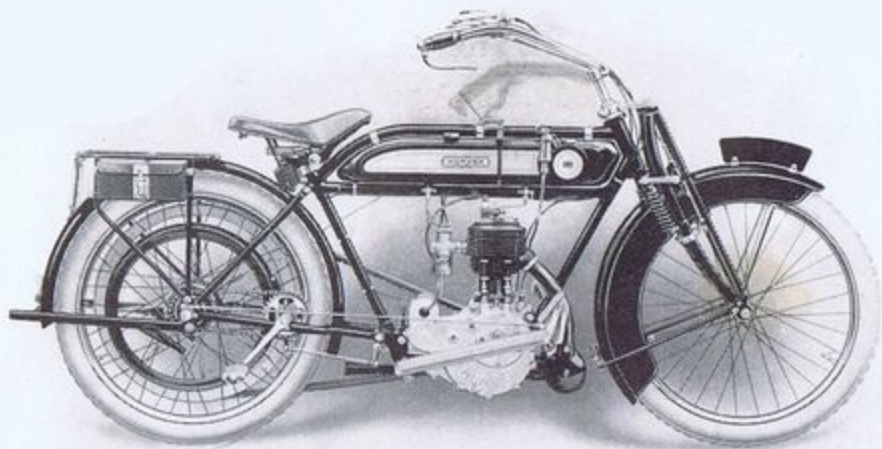
Introduction

THE pleasures of motor cycling need no longer be confined to those with a knowledge of engineering. The present day motor cycle has reached such a degree of perfection that mechanical trouble is now a thing of the past—and a sphere of health-giving enjoyment is created, which can be shared by all able to ride an ordinary pedal bicycle.

Humber Motor Cycles have achieved an extraordinary degree of popularity; not only are they essentially reliable—as proved by their successful performances in all kinds of competition—but so designed that a sense of security and comfort is enjoyed by their riders. Simplicity of manipulation, hill climbing power, and slow and silent running when desired are other outstanding features which have done much to popularise these splendid machines.

Particular attention is drawn to the Humberette, a low priced, thoroughly reliable and efficient vehicle, which after two years of careful and constant experimenting has proved itself the ideal cycle car for the man of moderate means.

We shall be glad to furnish any further information which may be desired and to forward the name and address of our nearest Depot or Agent where the latest models may be inspected.



7751-1

The 3 $\frac{1}{2}$ h.p. Three-Speed and Free Engine Humber

SO far as the engine and general arrangement are concerned, this model remains, with some improvements, the same as last year.

The special Sturmey - Archer Three - Speed Gear which has taken the place of the two-speed gear we supplied in former years is being retained, as we find that the larger range of gears thus available makes this model more efficient for side-car work—its hill-climbing capacity being greatly increased.

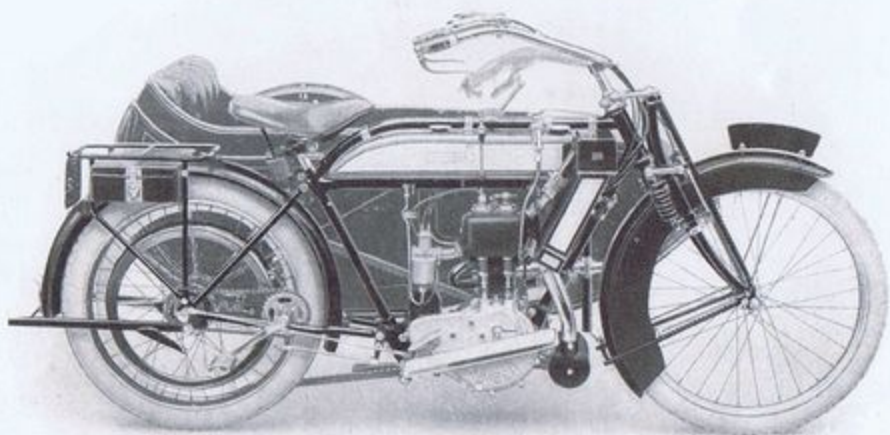
The kick starting device included in the specification will also be greatly appreciated. The engine can be started with the rider in the saddle by one downward push of the pedal—rendered more easy by the half compression device which is also provided.

Lubrication is also greatly improved by the fitting of a Best & Lloyd type of semi-automatic drip feed, thus dispensing with the old style pump which left much to be desired. Smoothness of running, silence, speed, flexibility, comfort and ease of starting are outstanding features of this deservedly popular machine.

Humber

3½ h.p. Three-Speed and Free Engine

- Engine** - - Single cylinder, 3½ h.p.; bore and stroke 84 × 90 m/m; cylinder desaxé; ball bearings to main shaft; mechanically operated valves; half compression device for easy starting; large silencer with tail tube.
- Starting Device** Kick starter on chain stays.
- Carburetter** - Brown & Barlow; operated by Bowden wires from handlebar.
- Ignition** - - High tension magneto; gear driven; placed behind engine; controlled from handlebar.
- Transmission** - Dunlop 1 in. rubber belt, V shape, on variable pulley, giving gears ranging from 4:1 to 6:1 on top gear.
- Three-Speed Gear and Free Engine** - - Sturmey-Archer; operated by lever on top tube; clutch operated by foot pedal.
- Tank** - - Registered design; made in two compartments; petrol capacity 1½ gallons; oil capacity 1 quart; fitted with petrol gauge and drip feed lubricator to engine (Best and Lloyd type).
- Frame** - - Strong design; dropped top rail; low position (saddle 28½ in. from ground); fitted with foot-boards and specially designed spring forks.
- Wheels & Tyres** 26 in. × 2¾ in. Dunlop extra heavy rubber studded tyres, with beaded edges.
- Mudguards** - Detachable; front guard has side extensions for its whole length; back guard hinges up to facilitate tyre repair; belt guard also fitted.
- Brakes** - - Front rim brake, and powerful internal V back rim brake operated by foot pedal.
- Control** - - All Bowden wires neatly enclosed in handlebar.
- Saddle** - - Lycett No. 4 Pan seat or Brooks' B170.
- Carrier** - - Of strong steel tube.
- Stands** - - To front and back wheels; rear stand is hinged on fork ends separate from hub spindle; both wheels can be removed with stands in position.
- Tool Bags** - - Fitted each side carrier, with complete kit of tools.
- Number Plates** Enamelled ready for registration letters and numbers.
- Finish** - - Enamelled black on coslettised frame, lined green and gold; tank finished with large aluminium panels and lined to match frame.
- Price** - -



\$75 - less side car

The 3½ h.p. Water-cooled Model

THE 3½ h.p. single cylinder water-cooled model, which is intended for side-car work, is we venture to think exactly what has long been wanted by a large number of motor cyclists. The radiator is fixed to the down tube in front of the engine, strongly made and of ample water capacity. This machine is listed with a very smart side-car attached. Owing to the fact that the maximum output of power may be upheld continuously without any signs of falling off or overheating, even under the worst possible road conditions, it is superior to any air-cooled machine on the market for side-car work. The power developed by the engine is really marvellous, and the fuel and oil consumption exceedingly moderate. The machine is extremely pleasant to drive, being flexible, speedy and very silent.

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Humber

3 $\frac{1}{2}$ h.p. Water-cooled Model

- Engine** - - Single cylinder; water-cooled with large jackets surrounding bore, valves and head; 3 $\frac{1}{2}$ h.p.; bore and stroke 84 x 90 m/m; cylinder desaxé; ball bearings to main shaft; mechanically operated valves; half compression device for easy starting; large silencer with tail tube.
- Radiator** - - Honeycomb; very strong and light; water capacity 3 quarts, giving ample cooling; fitted with concealed escape pipe.
- Starting Device** Kick starter on chain stays.
- Carburetter** - - Brown & Barlow; operated by Bowden wires from handlebar.
- Ignition** - - High tension magneto; gear driven; placed behind engine; controlled from handlebar.
- Transmission** - - Dunlop 1 in. rubber belt, V shape; on variable pulley, giving gears ranging from 4:1 to 6:1 on top gear.
- Three-Speed Gear and Free Engine** - - Sturmey-Archer; operated by lever on top tube; clutch operated by foot pedal.
- Tank** - - - Made in two compartments; petrol capacity 1 $\frac{1}{2}$ gallons; oil capacity 1 quart; fitted with petrol gauge and drip feed lubricator to engine (Best and Lloyd type) and extra large fillers.
- Frame** - - - Strong design; dropped top rail; low position (saddle 28 $\frac{1}{2}$ in. from ground); fitted with foot-boards and specially designed spring forks.
- Wheels & Tyres** 26 in. x 2 $\frac{1}{2}$ in. Dunlop extra heavy rubber studded tyres, with beaded edges
- Mudguards** - - Detachable; front guard has side extensions for its whole length; back guard hinges up to facilitate tyre repair; belt guard also fitted.
- Brakes** - - - Front rim brake and powerful internal V back rim brake, operated by foot pedal.
- Control** - - - All Bowden wires neatly enclosed in handlebar.
- Saddle** - - - Lycett No. 4 Pan seat or Brooks' B 170
- Carrier** - - - Of strong steel tube.
- Stands** - - - To front and back wheels; rear stand is hinged on fork ends separate from hub spindle; the latter can be removed with stand in position.
- Tool Bags** - - - Fitted each side carrier, with complete kit of tools
- Number Plates** Enamelled ready for registration letters and numbers.
- Finish** - - - Enamelled black on coslettised frame, lined green and gold; tank finished with large aluminium panels and lined to match frame.

Price

„ with Side-Car attached

The Humberette

"A Car in Miniature"

AFTER many experiments and tests, we succeeded in producing and placing upon the market at the commencement of last year, a Cycle-Car which has since proved itself a wonderfully popular little vehicle.

The Humberette is a light car, having surprising capabilities; it is as reliable as a large car, and little more in cost than the combined price of any motor cycle with side-car, the power of which is considerably less.

The Humberette is exceedingly cheap to maintain, being light on tyres, and with a Smith's four jet carburetter doing a very moderate fuel consumption. The R.A.C. rating is 8.7, thus allowing more than 1 h.p. for each cwt., the weight being under 7 cwt. It easily comes under the definition of a Cycle-Car.

It is essentially a miniature car of attractive and sporting appearance, exceedingly comfortable and well finished, and providing the convenience and comforts enjoyed by the owner of a large car.

Although the 8 h.p. air-cooled model, of which 2000 are now in daily use, has given great satisfaction during the past season, it has been decided for 1914 to offer in addition a water-cooled model, exactly similar in every other respect to the air-cooled one.

Outwardly it is difficult to note the many differences in the new model from that which has proved so serviceable during the past twelve months, but a closer inspection will reveal the many refinements in detail which have been brought about by the experience gained during 1913.

The water-cooled model presents perhaps a more pleasing picture than the air-cooled, the radiator in the front and the hinged bonnet making it exactly similar in every respect to the large cars.

The radiator is of ample capacity and strongly made. The water jackets of the cylinders are carried round the valves, and the cooling has been found perfectly satisfactory.

A number of small though important refinements have been added to the chassis, longer radius rods are now fitted to the front axle, whilst tie rods are used to strengthen the rear axle. The pistons have been lightened and now carry both rings at the top, thus adding to the flexibility of the engine.

The new change speed quadrant with the trigger on the lever makes gear changing easy even to the novice, and the increase in diameter of the clutch is also an important improvement.

Decompressors are fitted as standard, with the assistance of which any lady may safely become the owner of a Humberette without fearing any difficulty whatever in starting up.

The steering is also improved with the result that on any roads the car runs perfectly steadily, and in traffic can be guided quickly and accurately without the slightest effort to the driver.

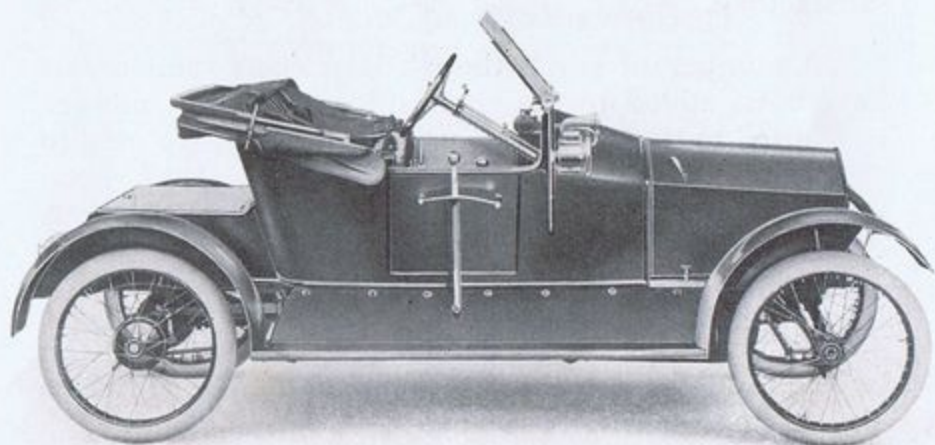
The body is finished in the best style, upholstered in the finest quality leather and painted up to the usual Humber standard of excellence. The width has been increased, providing ample room for two heavy passengers, and the tool box at the back has also been widened and will now take a spare wheel.

Both brakes are very sweet in action and can be applied without the slightest jerk or harshness. They are extremely powerful and it is possible to hold the car on the steepest gradients with either the foot or hand brake.

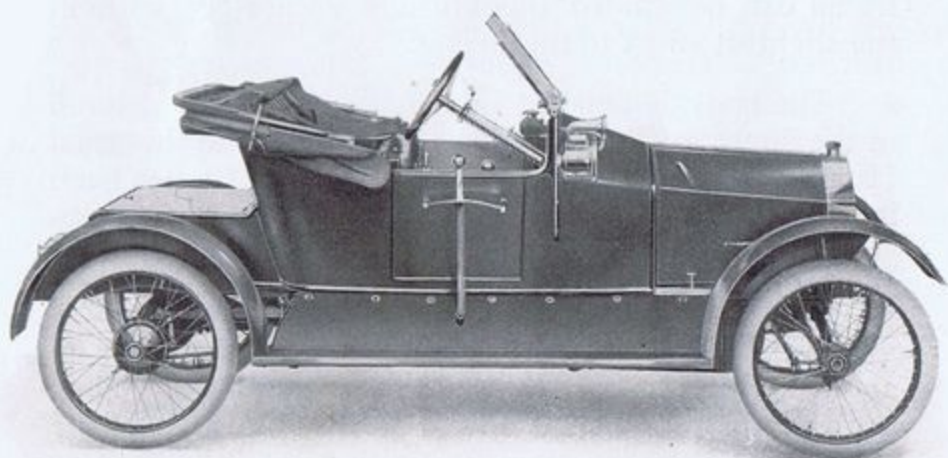
Guarantee as on page 11

Prices as on page 11

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£160/-/-
Air-cooled Model



Water-cooled Model

£170/-/-
BARNSTORMERS.CO.NZ

Kumberette

R. A. C. Rating 8·7 h.p.

- Wheelbase** - 7 ft. 5 in.
Track - 3 ft. 6 in.
Motor - Made in two types—Air-cooled and Water-cooled, both V type, 84 m/m bore, 90 m/m stroke. Decompressors fitted for easy starting. The Water-cooled is fitted with an efficient radiator, Thermo syphon cooling.
Lubrication - Splash type, automatically fed by a drip feed lubricator (Best and Lloyd type).
Ignition - High tension magneto.
Carburettor - Smith's four-jet Automatic type.
Petrol Tank - Fitted in dash, gravity feed.
Transmission - Leather-faced cone clutch, propeller shaft with universal joint between gear box and live axle.
Change Speed Gear - Three forward speeds and reverse.
Back Axle - Of the "live" type, driven by bevel gearing.
Front Axle - Best weldless steel tube, with lugs to support swivel axles.
Engine Control - Ignition and throttle levers conveniently placed on the steering column. Foot accelerator operating throttle, working in conjunction with, but independently of, hand lever.
Steering - By rack and pinion enclosed in a dust-proof box at the bottom of steering column.
Brakes - Specially designed external foot brake, fitted at the rear of gear box; hand-applied external compensating brakes on the road wheels.
Frame - Best weldless steel tube.
Springs - Half-elliptical transverse for the front axle, and two quarter-elliptical for the rear axle.
Wheels & Tyres - Wire wheels fitted with 650 × 65 m/m. Dunlop plain heavy light car tyres.
Body - Two-seater, streamline.

PRICES:

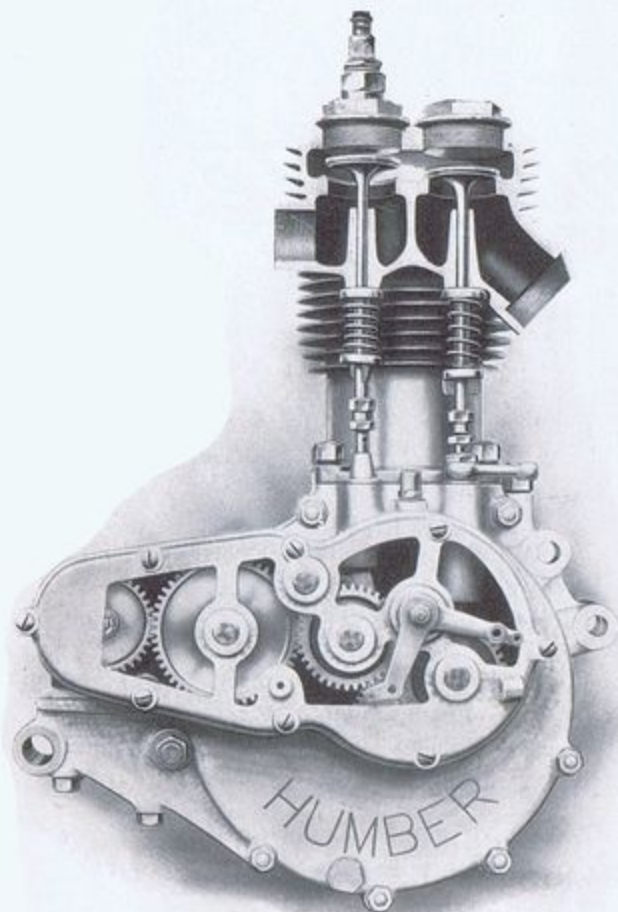
- Air-cooled Engine, complete with hood, screen, horn, head lights, tail lamp and kit of tools
Water-cooled Engine complete with hood, screen, horn, head lights, tail lamp and kit of tools

GUARANTEE. All goods are supplied and all repairs and other work are done by us upon the following terms as to Warranty:—In the event of any defect being disclosed we undertake, on the return of the defective part, carriage paid to our works, within twelve months of purchase, or date of invoice, to examine same and if we find it faulty through bad material or workmanship, to replace the defective part free of charge. This warranty is given in lieu of all implied warranties, which are hereby expressly excluded. No warranty is attached to cars or other goods which are not purchased either direct from us, or from our duly authorised agents.

Constructional Features of Humber Motor Cycles

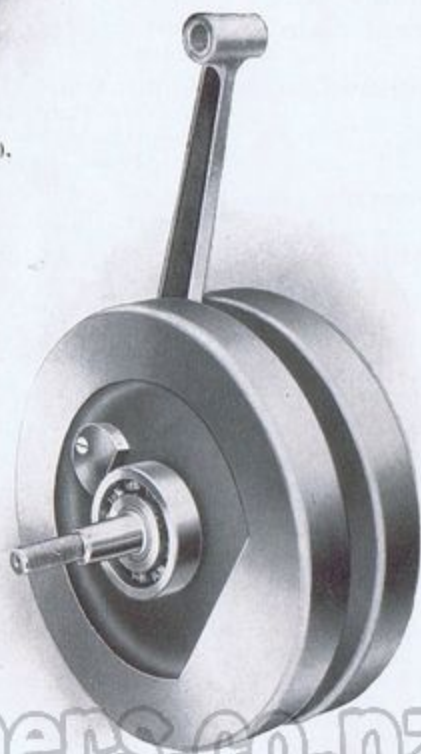
3½ h.p. Engine

This is, as the illustration shows, of the single cylinder type; it has bore and stroke of 84 m/m × 90 m/m; capacity 490 c.c.s.



3½ h.p. ENGINE
(with portion of timing gear cover removed).

A particularly noticeable feature is its clean lines, and the small number of exposed working parts. The flywheels have exceedingly heavy rims, which ensure smooth and steady running; their perfect balance is responsible in no small measure for the great flexibility of the engine.



FLYWHEELS AND CONNECTING ROD

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HUMBER PISTON

The piston is light but very strong, and fitted with two stepped rings at the top.

The piston rings are made of special metal which retains its flexibility at high temperatures.

The gudgeon pin is a pressure fit, and is prevented from turning by a silver steel snug; a gun metal pad at each end prevents scoring of the cylinder walls, should the pin move endways.

The Connecting Rod

is manufactured of a special steel stamping with an extra long bearing on the big end, ensuring maximum life and minimum wear on the crank pin.

Valves

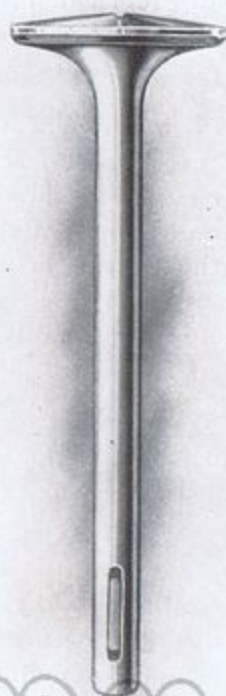
Interchangeable, conical valves of large diameter ensuring easy intake and outlet of the gases: they are mechanically operated, and easily removed.

The Valve Tappets

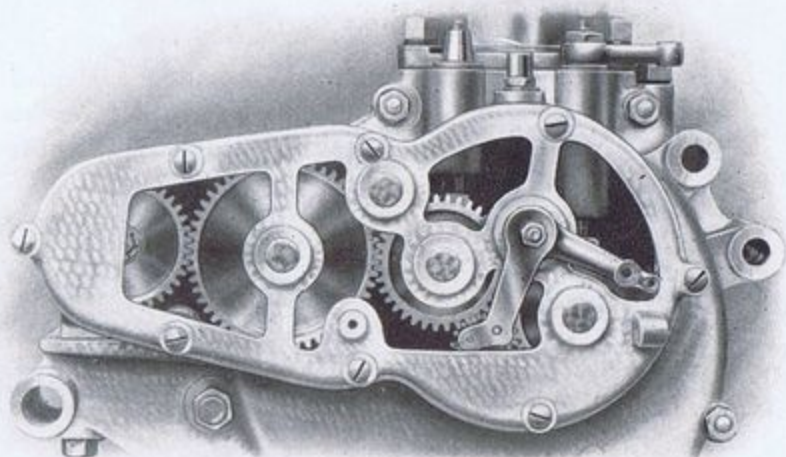
are easily adjusted without disturbing any other part of the mechanism (suitable tools are supplied with the machine).

Exhaust and Inlet Cams

are of external type, and designed to give long duration of the maximum lift, so enabling a full charge of gas to be drawn in, and complete scavenging of the combustion chamber during the exhaust stroke.



VALVE



TIMING GEAR

Timing Gear

Considerable care is taken in the manufacture of the timing gear to ensure absolute efficiency and reliability. It is automatically lubricated from the crank chamber.

Half Compression Device

This is a device of our own design which greatly reduces the effort necessary to start the machine. It is controlled by a lever on the left side of the handlebar, which, when operated, lifts the exhaust valve during part of the compression stroke, thus the charge is at a lower pressure at the moment of firing and may be ignited by the spark of a slow running magneto more readily.

The Crank Case

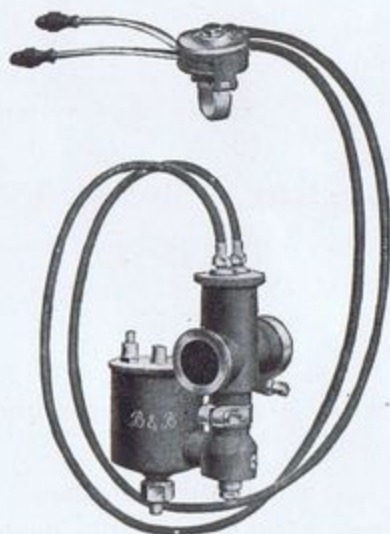
is rendered oil-tight by reason of the great care taken in its manufacture.

Ignition

The ignition is by high tension magneto, gear driven and conveniently placed on a platform (which is part of the crank case) behind the cylinder, where it is accessible and protected from wet and mud. The ignition is advanced and retarded by means of a lever on the left side of the handlebar.

Carburetter

The Carburetter is of the latest type with a variable jet, the throttle and air being controlled from handlebar. It has been found exceptionally good for power, economy and slow running.



CARBURETTER

Lubrication

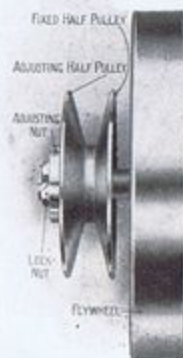
The engine is lubricated on the splash system, fed by a semi-automatic drip feed pump, so obviating any possibility of damage or leakage; the oil is conveyed to the engine by a pipe of large diameter.

The Silencer

is large and very effective. It is fitted with a long tail tube.

Transmission

The power developed by the engine is transmitted to rear wheel by means of a V shaped rubber belt.

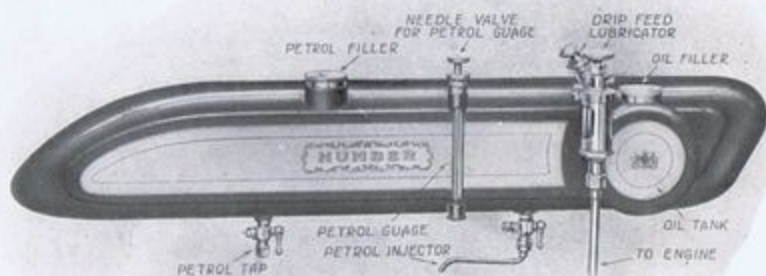


ADJUSTABLE PULLEY

A variable pulley is standard and gives a variation of gears from 4:1 to 6:1. The adjustment of the pulley is very simply and quickly accomplished.

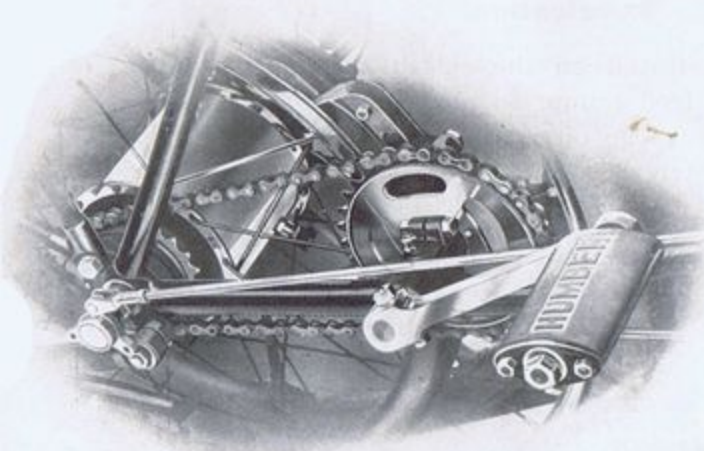
Tank

The petrol tanks are large, neat in appearance and very strong. They are fitted with large fillers, petrol gauge and injection tap. The lubricating oil is contained in a separate tank or barrel, carried inside the petrol tank, from whence it is conveyed by a pipe of large diameter to the engine. The lubricating system is a semi-automatic drip feed of the famous Best and Lloyd type.



Kick Starting Device

A very simple and effective starting device, the essential features of which are shewn in the illustration. The pedal is connected by chain to the rear hub, and renders it possible to start the engine by one downward thrust of the pedal, or if desired, the pedal may be used as a starting handle. Adjustment of the chain is provided in an eccentric bush, contained in the frame bracket.



KICK STARTER

Frames

Humber Motor Cycle frames are of special design and low build. They are so arranged that a comfortable riding position is obtained and though the rider can place both feet on the ground whilst in the saddle, there is plenty of clearance under the engine, making the machine particularly suited to Colonial use.

Forks

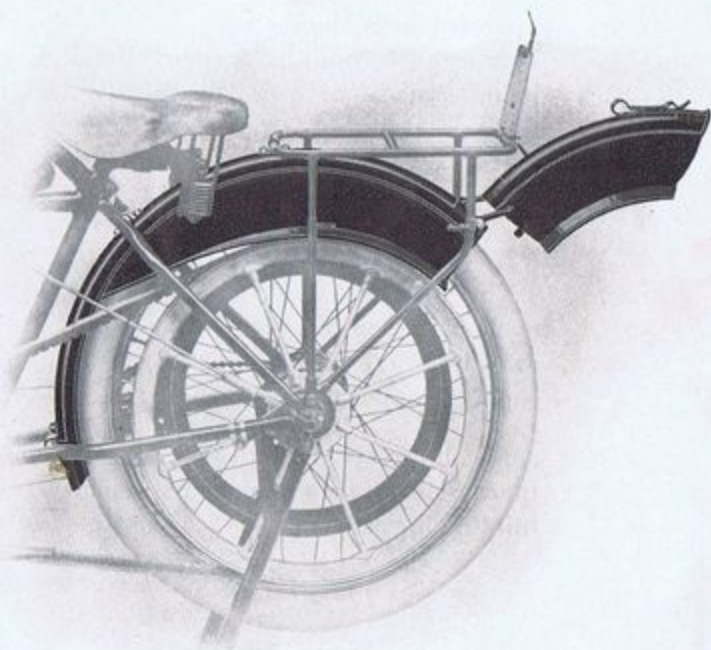
The spring forks are strong and absorb all vibration caused by unevenness of the road, yet maintain rigidity in the steering.

Brakes

A strong front rim brake is fitted, operated by a lever under the right side of the handlebar; this in conjunction with the foot pedal operated brake (which actuates on a special rim affixed securely to the spokes on the opposite side to the belt rim) enables the machine to be brought to a standstill in a very short distance; less forcible application of both or either will slow down the speed as gradually as desired.

Mud-Guarding

Front and rear wheels are supplied with very efficient mud-guards, side shields being fitted to both. The rear guard is divided so as to hinge upwards, greatly facilitating tyre repair and removal of the rear wheel. Shields effectively protect the belts, so obviating slip in wet weather.



DIVIDED REAR GUARD AND BELT SHIELD

Stands

Rear stands are fitted and so arranged that the back wheel can be removed without detaching the stand. A front wheel stand is fitted in addition.

Carrier

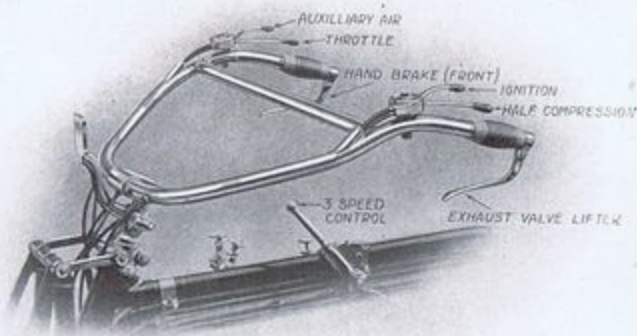
A strong tubular steel carrier is fitted over the rear wheel.

BARNSTORMERS.CO.NZ

HANDLEBARS (Registered Design).

The shape ensures a minimum of wrist fatigue, and the position is exceedingly comfortable.

All control levers are conveniently placed on the bar in such a position that to operate them the hands need not leave the handles, the cables themselves being concealed in a particularly neat manner.



3 1/2 h.p. HANDLEBAR CONTROL.

Finish

The anti-rust process is utilised before enamelling. They are enamelled in black, tastefully lined in green and gold, and the tanks are finished with aluminium panels, and suitably lined to match the frames.

An innovation is the "All Weather" finish. All those inaccessible parts which are usually plated are enamelled, so minimising the chance of rust.

A complete Kit of Tools is supplied with each Machine consisting of the following:

- | | |
|----------------------------|---------------------------|
| Tool Roll. | Magneto Spanner. |
| Valve Cap Spanner. | Tappet Adjusting Bar. |
| Adjustable Spanner. | Double Open-end Spanner, |
| Screwdriver. | 7 m/m. |
| Pair of Pliers. | Two Double Open-end Span- |
| Large Oil Can. | ners, 8 m/m. |
| Duster. | Steering Head and Exhaust |
| Three-speed Hub Spanner. | Pipe Spanner. |
| Cylinder Holding-down Bolt | |
| Spanner. | |

Hints on the Management and Adjustment of Humber Motor Cycles

Starting

FILL the forward tank with lubricating oil, the drip feed should be set so that the pump empties itself in about 15 minutes. When the machine is not in use the pump handle should be locked with catch.

Fill with petrol through filler cap at rear right hand of tank, using a funnel provided with a gauge for the purpose, afterwards turn on the petrol tap under tank (it is "on" when vertical) and depress the needle valve of the carburetter until the float chamber is filled.

Adjust the control levers as follows:—close the air inlet (by pushing the top right hand lever to the left) and open the throttle (by moving bottom lever to right). Advance the magneto by moving the lever on left side of handlebar.

Press the clutch pedal forward until it is held in position by the catch fitted in the pedal shaft, thus enabling the belt rim and engine to rotate independently of the rear wheel (this is termed the free engine position). Place the change speed lever in the high gear notch (the one at the rear of the quadrant) and move the half compression lever as far to the right as possible. With one leg over the saddle thrust down sharply the kick-starter pedal when the engine will commence to fire. Move the half compression lever back and adjust the air and gas levers until the engine is slightly racing (taking care to use as much air as possible), place the change speed lever in the low gear position, let in the clutch very gradually, when the machine will glide away. When comfortably started change into the middle and then the high gear.

Lubrication

Probably the most important factor in the successful running and long service of the motor cycle is its lubrication. Though simple to carry out it is a duty which is too often neglected by the novice—with disastrous results to the engine. The drip should be regulated so that one pumpful is exhausted about every ten miles on give-and-take roads. Too much is better than too little, but discretion must be used and the amount

of work being done by the engine taken into consideration. The plunger of the pump and drip is conveniently placed so that there is no necessity to dismount or stop when lubricating the engine. Use none but best oil.

After a very long ride, drain off the dirty oil by means of the plug provided at the base of the crank chamber—of course, not forgetting to give a fresh charge of at least two pumpfuls before re-starting the engine.

Do not forget that the bicycle portion of the motor cycle such as hubs, pedals, steering head, etc., require occasional lubrication.

Hints

Careful attention to the information given above and the following hints will ensure long and satisfactory service, and absence of trouble.

Always give as much air as the engine will allow, as by this means more economical running will result, the speed can be more quickly increased or decreased by means of the gas lever, and the engine will keep much cooler.

Examine all nuts on the machine frequently and tighten up when slack. After riding on dirty roads use paraffin to clean bearings and when free from dirt inject lubricating oil.

Keep the belt clean and free from oil; rubber belts do not require any dressing.

Do not attempt to run on petrol that has been standing for a long time in the tank. It should be drained off and fresh substituted.

Keep the tyres well inflated—the machine is thereby rendered faster—and wear on tyres and risk of punctures less.

Possible Troubles and their Remedies

Difficulty in Starting

To facilitate starting, especially in cold weather, a little petrol may be injected through the compression tap at the head of the cylinder.

LACK OF PETROL in the carburetter may be the cause. This is remedied by disconnecting and cleaning out the supply tube.

IMPERFECT IGNITION invariably results in difficult starting. Examine high tension wire to plug and see that the insulating material has not worn, so causing short circuit where naked

wire may be touching the machine. Remove and inspect the plug; if the porcelain is cracked a new plug will be required. The points should be cleaned and adjusted so that the distance apart is about the thickness of a visiting card.

EXAMINE THE MAGNETO.—The high tension terminal must make good contact and the slip-ring be free from any trace of oil. See that the carbon brush is sound and does not stick in its housing.

The platinum points should be adjusted to obtain the correct distance apart, which can be ascertained by the small magneto spanner supplied in the kit.

The magneto is a delicate piece of mechanism and except for the adjustments above mentioned should not be tampered with except by an expert. Consequently if the trouble is not remedied by the means here stated, the magneto should be removed and forwarded to the makers.

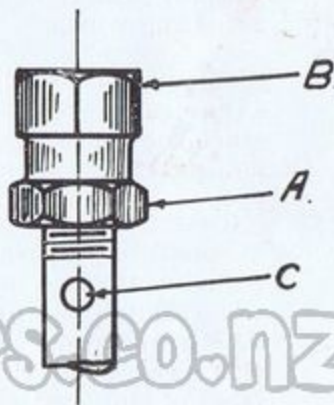
LACK OF COMPRESSION means, of course, lack of power. It may be caused through leaking valves, gummed or broken piston rings, faulty joints of valve caps, or sparking plug, or required adjustment of valve tappets. (See below).

LEAKING VALVES should be re-ground. To effect this take out the valve (by unscrewing the valve cap on the top of the cylinder, removing the cotter in valve stem to release the spring). Smear a paste of oil and fine emery powder round the valve face, replace in cylinder, insert screwdriver in slotted head and twist forwards and backwards; after every five or six turns lift the valve slightly and move round about a quarter of a turn. Repeat the operations until both surfaces are perfectly even. Care should be taken that the emery does not enter the cylinders and the valve chambers must be cleaned out with petrol before replacing the valve.

GUMMED PISTON RINGS can be cured by injecting paraffin and allowing to soak. A broken piston ring should be immediately replaced and care taken to remove every trace of deposit and broken portions.

FAULTY JOINTS.—Fit new copper asbestos rings and tighten up as much as possible.

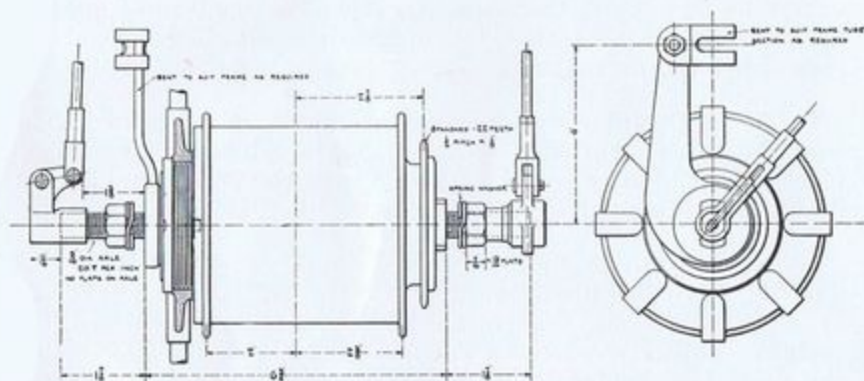
ADJUSTMENT OF VALVE TAPPETS.—The diagram depicts the adjustable tappets. Unlock nut A, screw adjustable thimble B until the distance apart when the valve is on its seating is equal to about the thickness of a visiting card, then lock up nut A. Should B be tight on the tappet insert the steel bar provided with tool kit in hole C and lever round.



OVER-HEATING OR PRE-IGNITION is often caused by a deposit of carbon on the cylinders, occasioned by the use of inferior lubricating oil. Insufficient lift of the valves will also cause over-heating.

KNOCKING ON HILLS.—Should the engine develop a knock this can be remedied by slightly retarding the magneto, opening the gas lever, and slightly closing the air lever. In case of three-speed models, changing to a lower gear is, of course, the remedy.

Adjustment and Care of the Sturmey-Archer Three-speed Gear



ADJUSTMENT.—The bearings are adjusted by the right hand cone, so that the wheel revolves freely forward without shake. A slight drag when wheeled backwards is not detrimental, being due to the plain bearing inside the free wheel, which is stationary when the machine is running.

After the wheel has been fixed in position the axle nuts must be screwed up very securely, and the left hand nut locked to the special washer provided by inserting small screw inside whichever of the three holes matches the hole in the locking washer. The right hand nut is efficiently locked by the clutch actuating worm.

Screw up the bell crank fulcrum bracket on the left side only so far as to permit of $1/32$ inch shake of the bell crank lever when the indicator is at its full extent. No lock-nut is necessary as the bracket cannot become unscrewed.

GEAR CONTROL.—To adjust gears correctly, place control lever in small adjustment notch in quadrant and regulate knurled adjustment piece until the gears are quite free from belt pulley when clutch is engaged. When nearly in free position or "between gears" a grinding or grating sound will be heard; this is caused by the teeth of the sun pinions just slipping past faces of clutches; adjust until this has disappeared.

CLUTCH CONTROL.—The long clutch rod should be quite loose when the clutch is engaged, and the length adjusted to release the clutch with the minimum of movement of the pedal.

LUBRICATION.—Sperm oil is best, but any good thin cycle lubricating oil may be used. Do not use cylinder or other thick oils. Lubricate freely, say every 150 miles.

RUNNING TROUBLES.—Should any trouble arise it will generally be found to be due to incorrect adjustment. A slipping clutch may be caused by the long clutch rod being too tightly adjusted, by stiffness of the clutch operating worm or connections through caked up mud or lack of lubrication.

FAILURE TO RELEASE CLUTCH.—Is due to too slack adjustment of the long clutch rod, and bad operating position of the clutch worm arm. The clutch worm may project too far over the axle end, or the clutch pedal tube may not be securely held from revolving.

FAILURE TO CHANGE GEAR PROPERLY may be due to wrong adjustment, imperfectly secured quadrant clip, wrong setting of the bell crank bracket, interference of connections with some projection of frame, or in rare cases by insufficient tension on the safety spring in the outside spring box.

Customers should always remember that there is at their disposal the advice and assistance of our Technical Department, which is at all times only too pleased to give any information regarding the running of Humber Motor Cycles that may not be contained in this Catalogue.

BARNSTORMERS.CO.NZ

Terms of Business

General

The prices appearing in this catalogue are for net cash on delivery of the motor cycle at our works.

All orders are executed strictly in rotation as received. Each order to be accompanied by a deposit of one-third its value.

Should any further particulars of our motor cycles be desired beyond those given in this catalogue, we cordially invite our patrons to communicate with us and we shall be pleased to give every information required.

Remittances

Cheques and Post Office Orders should be made payable to HUMBER, LTD., and sent to HUMBER, LTD., COVENTRY.

Agencies

We have appointed agents in all the leading towns in the British Isles, Colonies and foreign countries. We shall be happy to supply the name and address of the agent for any district on application.

Packing

The machines are packed in special crates which are not returnable under any circumstances, at an extra charge of and are delivered free on rail at Coventry Station.

Export

Crate for one machine, extra. Case for one machine, extra. The machine is handed over to the Railway Company and the consignee pays all further charges.

Railway Transit

All goods are delivered free on rail at Coventry Station in good condition, and signed for as being so by the Railway Companies, who then become the agents of the purchaser, the latter paying all charges for carriage, etc. Customers should therefore carefully examine machines when received, and if damaged should sign accordingly, and make an immediate claim upon the carriers.

Repairs and Replacements

All parts sent for repair or replacement must be forwarded carriage paid, bearing the sender's name and address, and, if possible, the machine number and year of manufacture.

Motor Cycles which are sent for repair will only be ridden by our employees at the risk and responsibility of the owners.

Alterations in Prices

The Company reserves the right to alter any prices or specifications in this catalogue at any time without notice.

Humber Limited

Gradual Payment System

Our Gradual Payment System enables those who are desirous of becoming owners of Humber Motor Cycles, but who cannot conveniently pay the full price on delivery, to attain their object.

After selecting the machine, the accompanying form should be filled up and forwarded to any of our Depôts, or to one of our numerous agents, together with the necessary deposit. On our accepting the application, the Motor Cycle will become the absolute property of the purchaser, whose only liability will be to pay the remaining instalments direct to **Humber, Ltd., Coventry**, or to one of our Depôts as shown on page 1.

Instalments must not be paid to our agents unless customers are instructed to do so, as the Company will not be responsible for monies so paid.

No payment can be recognised unless acknowledged on our printed form of receipt.

All applications are treated in an entirely confidential manner.

Easy Payment Terms

| MODELS. | Catalogue Price. Net Cash. | TABLE A. | | | TABLE B. | | |
|-------------------------------|-------------------------------|-------------------|----------|------------------------------------|-------------------|----------|-----------------------------------|
| | | Instalment Price. | Deposit. | Plus 11 Equal Monthly Instalments. | Instalment Price. | Deposit. | Plus 6 Equal Monthly Instalments. |
| 3½ h.p. Watercooled Model | 75 | | | | | | |
| 3½ .. 3 Speed and Free Engine | 75 | | | | | | |

Motor Cycles will be supplied through our Agents, Depots, or direct from our Coventry Works.

In the event of the application not being entertained by the Company, the deposit will be returned in full; but if the applicant should cancel the order after acceptance, and prior to the motor cycle being supplied, the Company reserve the right to retain the deposit to cover expenses and loss.

All motor cycles sold on this system come under and are subject to the Guarantee on page 26.

Motor Cycle Guarantee

We give the following guarantee with our machines instead of the guarantee implied by statute or otherwise, as to the quality or fitness for the purpose of motor cycling, of goods supplied by us; any such implied guarantee being in all cases excluded. In the case of motor cycles which have been used for "hiring out" purposes, or in respect of which our Trade Mark or manufacturing number has been removed, no guarantee of any kind is given, or is to be implied.

We guarantee, subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship; but this guarantee is to extend and be in force for three months only from date of purchase, and the damages for which we make ourselves responsible under this guarantee are limited to the cost of repairs to the motor cycle. We undertake, subject to the conditions mentioned below, to make good at any time within three months, any defects in these respects to our motor cycles. This guarantee does not apply to defects caused by wear and tear, misuse or neglect.

Any motor cycle sent to us to be plated, enamelled, or repaired, whether the repairs are required for the purpose of making good the defects before referred to or otherwise, will be repaired upon the following conditions, i.e., we guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of material and workmanship, such guarantee to extend and be in force for three months only from the time such work shall have been executed, and this guarantee is in lieu and in exclusion of any common law or statute warranty, and the damages recoverable are limited to the cost of any further work which may be necessary to amend and make good the work found to be defective.

Conditions of Guarantee

If a defective part should be found in any of our motor cycles at the date of purchase or after the repairs above referred to have been executed by us, it must be sent to us, carriage paid, and accompanied by an intimation from the sender that he desires to have it repaired free of charge under our guarantee, and he must also furnish us at the same time with the number of the machine, the name of the agent from whom he purchased, and the date of purchase, or the date when the alleged defective repairs were executed, as the case may be.

Failing compliance with the above, no notice will be taken of anything which may arrive, but such articles will lie here at the risk of the senders; and this guarantee, and any implied guarantee, shall not be enforceable.

We guarantee only those machines which are bought either direct from us or from one of our duly authorised agents, and under no other conditions.

We do not guarantee the specialities of other firms, such as tyres, saddles, chains, lamps, belts, etc., supplied with our motor cycles or otherwise. We endeavour to secure the highest quality of these articles, and the makers whose names usually appear thereon are nearly in every case willing to replace any defective part, and we will at all times furnish the maker's name as a proof of the quality.

The Term "Agent"

is used in a complimentary sense only, and those firms whom we style our agents are not authorised to advertise, incur any debts, or transact any business whatsoever on our account, other than the sale of goods which they may purchase from us; nor are they authorised to give any warranty or make any representation on our behalf other than those contained in the above guarantee.

Order Form

To Humber Limited, Coventry

Date.....19.....

Please supply to me one $3\frac{1}{2}$ h.p.....HUMBER MOTOR CYCLE, as described below, to be delivered at

I agree to pay you for same as follows: by deposit on signature hereof £ : : and the balance by..... monthly instalments of £ : : each, the first of such instalments to be paid on the 1st day of..... next, and in the event of any instalment being in arrear for seven days the whole of the remaining instalments shall thereupon become payable.

The above deposit is to be returned to me if this Order be not accepted by you within fourteen days.

Model required

Name (in full).....

Address

How long Resident at this Address

Previous Address

(in full)

Occupation

Employed at (in full)

Signature

Witness' Signature

Address

**Change of Address must be promptly notified to
Humber Limited, Coventry**

Form of Guarantee

**For use when the Purchaser is not a Householder
Guarantor must be a Householder**

To Humber Limited, Coventry

In consideration of you supplying to

Mr.

of

.....
a Motor Cycle as appears upon the annexed Order, I hereby guarantee the due payment to you of the instalments of the price thereof, as provided in such Order. And I agree that any extension or extensions of time for payment granted by you shall not in any way prejudice your claim upon me, nor need any notice of such extension or extensions be given to me.

Dated.....19 ...

Name in full.....

Address

.....
Occupation

How long Resident at this Address

Previous Address

(in full)

Employed at (in full).....

.....
Signature

Witness' Signature

Address

BARNISGALMERS.CO.NZ



Agents:

A. G. Healing & Co.

93 Cashel Street

CHRISTCHURCH, N.Z.

Also at **COURTENAY PLACE**
WELLINGTON, N.Z.