



MOTORCYCLE
MANUFACTURERS BY
APPOINTMENT TO
H.M. THE KING,

1927

O.C. 600 C.C.

O.H.V.

Douglas

MOTOR CYCLE

THE IDEAL O.H.V. DUAL PURPOSE MOUNT

DOUGLAS MOTORS LTD
KINGSWOOD BRISTOL

BARNSTORMERS.CO.NZ

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O.C. 600 c.c.,

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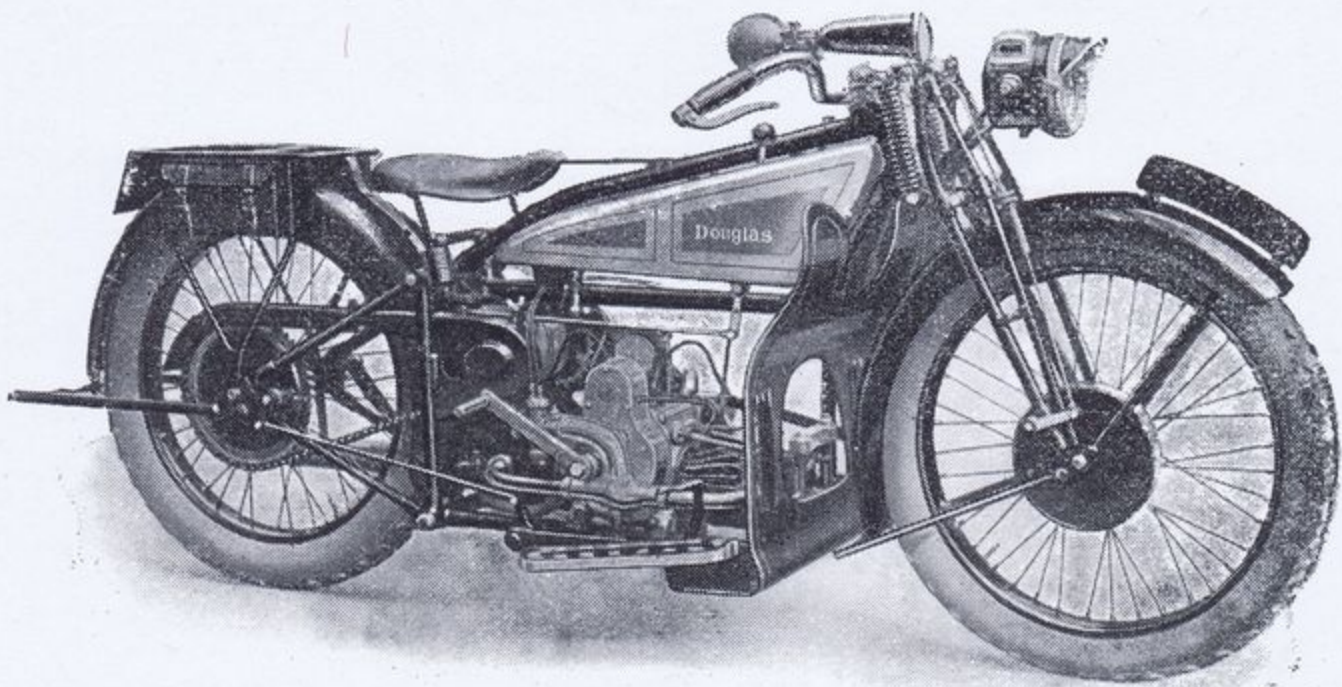
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O. C. SOLO MODEL.

INTRODUCTION TO THE MODEL O.C.

THE 1927 O.C. MODEL, which has been so successful during the past season, is subject to minor alteration only. The many competition successes of this model go to prove the unfailing reliability and high speed touring capabilities of this excellent dual purpose mount.

The Douglas vibrationless, twin opposed overhead valve engine gives speed, power and acceleration far in excess of any other motor of similar capacity, and the reliability and smooth running, undoubtedly accounts for the wonderful popularity that this type of machine enjoys.

In this O.C. Model, every detail has been given careful thought and attention, and a large number of modifications have been introduced, which give increased all-round efficiency. These may be summarized as follows:—

- Single row roller bearing crankshaft.
- Dual mechanical lubrication.
- Improved pattern pistons.
- Steel push rods for valve operation.
- Strengthened kickstarter gear.
- New type of centre clutch plate, complete with dogged-on chain sprocket.
- Improved exhaust system and silencing.
- Increased ground clearance.
- New type of gear box, with solid splined shafts and splined sprockets, eliminating all keys.
- New operation of selector mechanism.
- Douglas internal expanding low pressure braking system.
- Taper roller bearings to wheels.
- Improved frame, giving greater strength, the head lug being fitted with taper roller bearings, complete with adjustable steering damper.

New type fork as used and tested in T.T. races.
Strengthened petrol tank, with oil-tight bulk head in front.
Quickly detachable spring filler caps.
Gate change lever through tank.
Petrol capacity—2 galls. 3 qts. ; Oil 3 pints.
Strengthened carrier and mudguard fixings.
Flat stays to front guard.
Ample chain guard clearance.
Facilities for inspection of rear cylinder sparking plug.
Improved footboard mounting ; provision for adjustable
footrests.
Sidecar attachments built into frame.
Duplex saddle fixings, accommodating different types of
saddles.
Neat arrangement of control wires.
Pressure grease gun lubrication throughout.

(The above can be considered the main features of the 1927 O.C. Model.)



SPECIFICATION.

ENGINE.

Bore 68 m.m., stroke, 82 m.m., capacity 596 c.c., developing over 17-h.p. at 3,800 r.p.m.

CRANKSHAFT.

Solid steel stamping, machined to take main bearings of large diameter. The big ends are of the single row roller type. Bob weights are fitted to the crankshaft, and the whole carefully balanced in a special manner to eliminate vibration.

CONNECTING RODS.

Are solid steel stampings of H section, the big end forming part of the roller bearing race. The little end is provided with a phosphor bronze bush, carrying the gudgeon pin and piston. All connecting rods are carefully balanced to one another.

PISTONS.

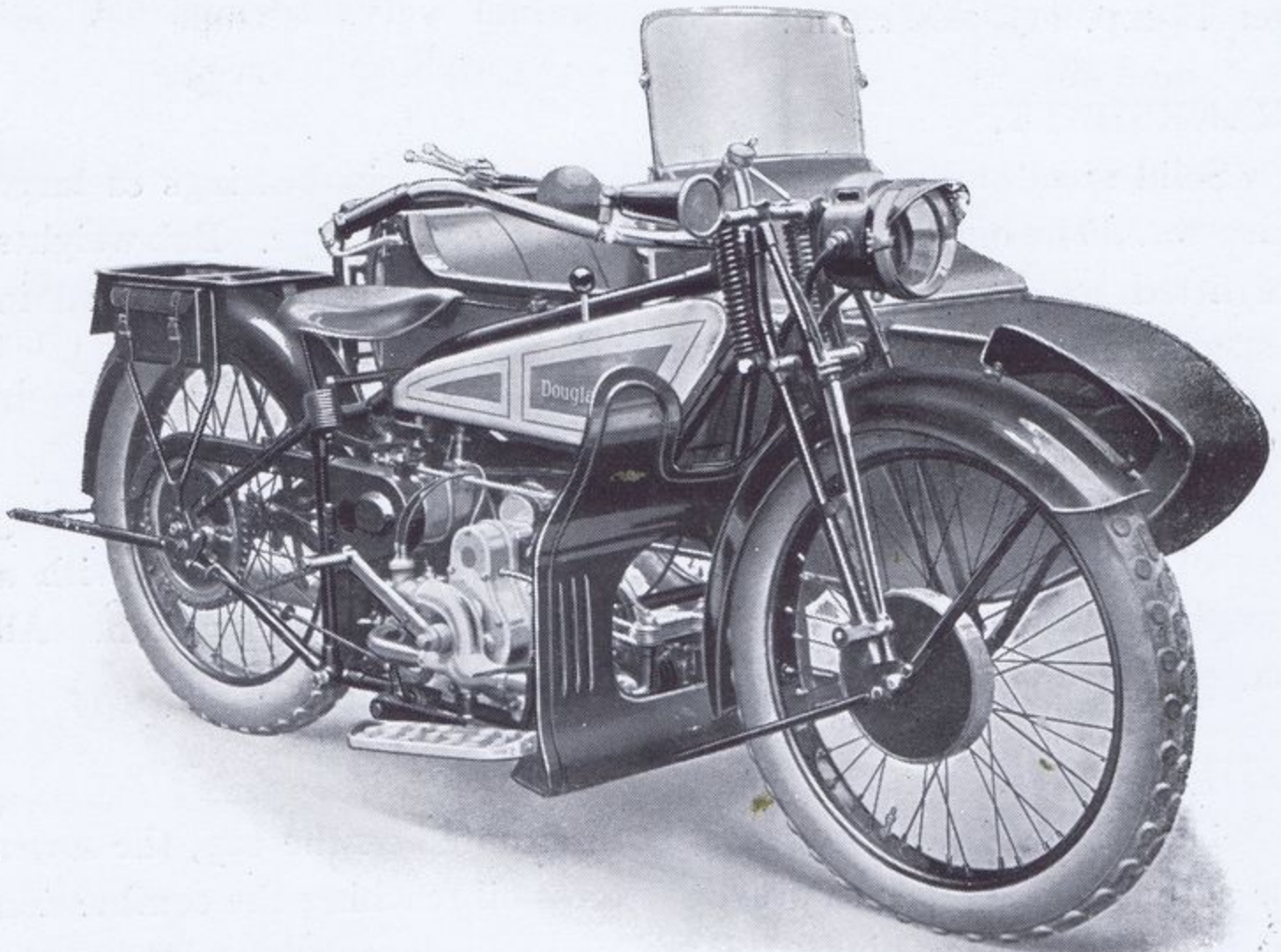
The pistons have two rings, both situated at the top, the lower one acting as a scraper to prevent excess oil reaching the combustion chamber. Gudgeon pins of large diameter accurately locate the pistons on the connecting rod.

CRANKCASE.

The crankcase, made of aluminium, is of clean exterior design and highly polished to prevent adhesion of dirt and oil, and allows of easy cleaning.

CYLINDERS.

Of close-grained grey iron, are cast with deep radiating fins to promote cooling. They are spigoted into the crankcase and held therein by long studs which also serve for the attachment of the cylinder heads.



O. C. TOURING COMBINATION.

CYLINDER HEADS.

Of special Douglas design, hemispherically shaped internally to increase turbulence and allow of large diameter valves. The valve rockers are carried upon hardened steel spindles in brackets cast solid with the cylinder head. The DOUGLAS patented rocker lubrication is fitted, which supplies oil from a ribbed aluminium trough to the rocker spindles by means of wicks.

VALVES.

Of semi-tulip shape, made from stampings of the latest valve steel formula, arranged to take special valve springs. A light cup and split collect provide a secure fixing for the springs.

CAMSHAFT.

Of alloy steel, hardened and ground to give accurate timing, is carried upon ball bearings, tappets of case hardened steel working in phosphor bronze guides operate directly upon the camshaft. This system combines maximum valve acceleration with light moving parts and absolute reliability.

Steel push rods are used to operate the valve rockers from the adjustable tappet ball ends, a further tappet adjustment being provided at the end of the rockers.

The valve timing is simplified by fitting three keyways cut in the crankshaft timing pinion, enabling a fine setting to be obtained.

LUBRICATION.

Is by two complete and independent systems :--(1) Mechanical Pump. Oil is drawn through the sight feed on the tank, under control of the needle valve adjustment, by the suction of the pump and passing through the pump is positively forced to the engine through a non return valve, situated in the front cylinder. The oil is scraped from the cylinder walls by the piston rings and draining to the sump, lubricates the big end bearings and there by splash to the rear piston, gudgeon pin, camshaft and tappets. Oil is fed through a hollow timing pinion spindle for lubrication of the timing pinions. The crankcase pressure release pipe carries oil mist for lubrication of the primary chain. Should the mechanical system fail, a tap situated in the tank can be turned through 90 degrees, which brings

the hand gump into operation, when the sight-feed should be adjusted to give the usual rate of oil flow. The pump is carried inside the timing case cover and all unsightly complications are obviated.

CARBURATION.

Is by two-jet, semi-automatic carburetter, placed in an accessible yet protected position. The induction pipe is fitted with a cast aluminium jacket, connected by suitable piping to the exhaust. This absolutely prevents freezing under the most severe conditions. A temperature control valve is fitted in a convenient position underneath the induction manifold.

IGNITION.

By Magneto of suitable type, specially constructed to give easy starting, together with reliability at high speeds.

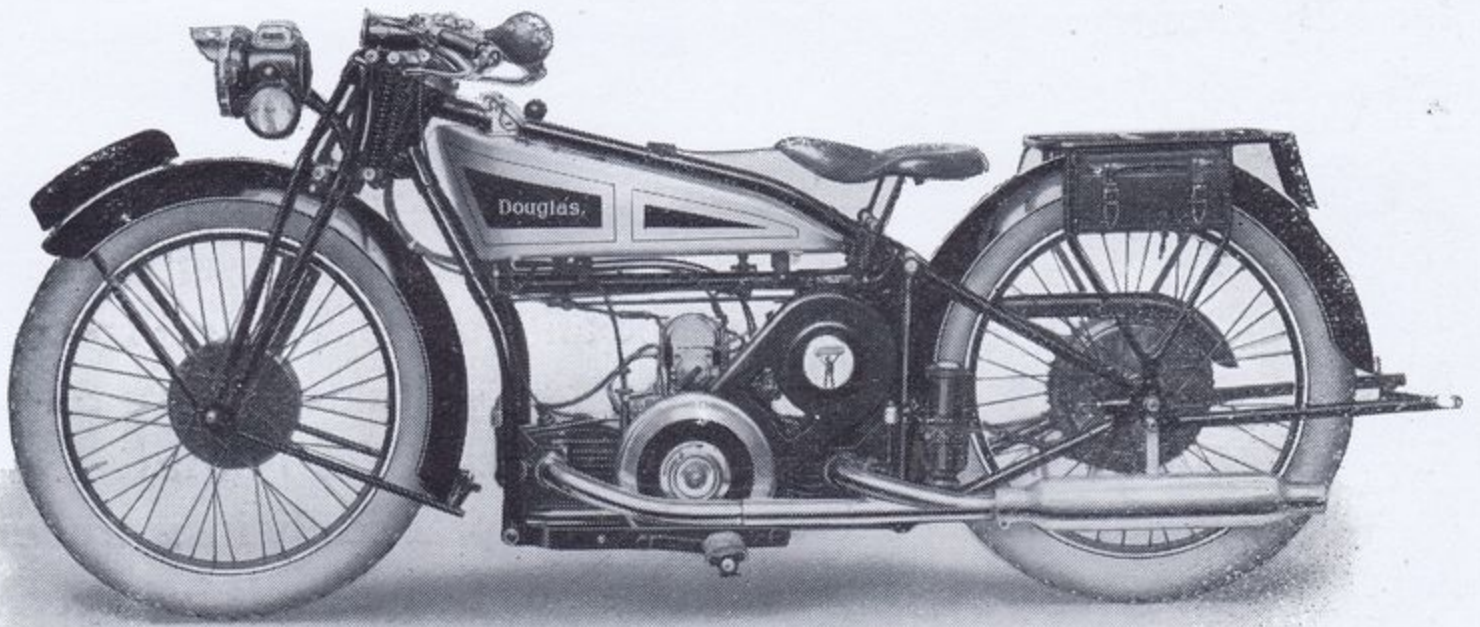
CLUTCH.

Douglas flywheel type. The centre sprocket plate has the friction discs rivetted thereon and is rigidly secured to the chain sprocket by rivets and dogs, eliminating all possibility of the sprocket working loose or coming adrift. It is carried upon roller bearings and all clutch operating thrust is taken by a separate ball thrust bearing interposed between the operating cam and the friction plate. A quick acting thumb screw device allows of clutch adjustments to be carried out without resource to tool bag.

Foot clutch can be fitted at small extra cost.

GEAR BOX.

The aluminium casing is fitted with incast gun metal housings to take the ball races. The main and lay shafts are short and rigid, having splines machined thereon to accommodate suitably shaped gear pinions. The gear ratios have been carefully selected making gear changing exceptionally easy even at high engine speeds. The low gear pinion is carried upon roller bearings, a feature which is only to be found in the Douglas gear box. An entirely new method of gear location is by a spring loaded plunger in the gear pinion on the main shaft. This method eliminates all possibility of gears coming out of mesh, irrespective of the lever gate. Special care



O.C. SPORTS.

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has been taken to ensure the complete gear box being oil tight, the main bearings having screw threaded oil retaining devices and felt washers.

The final drive sprocket is splined to the shaft, eliminating all possibility of sheared keys. A drain plug and oil level plug are fitted and a nipple arranged for grease gun lubrication.

GEAR RATIOS.

	SOLO.		SIDECAR.	
1st	11.6—1	13.2—1
2nd	7.5—1	8.5—1
Top	4.8—1	5.5—1

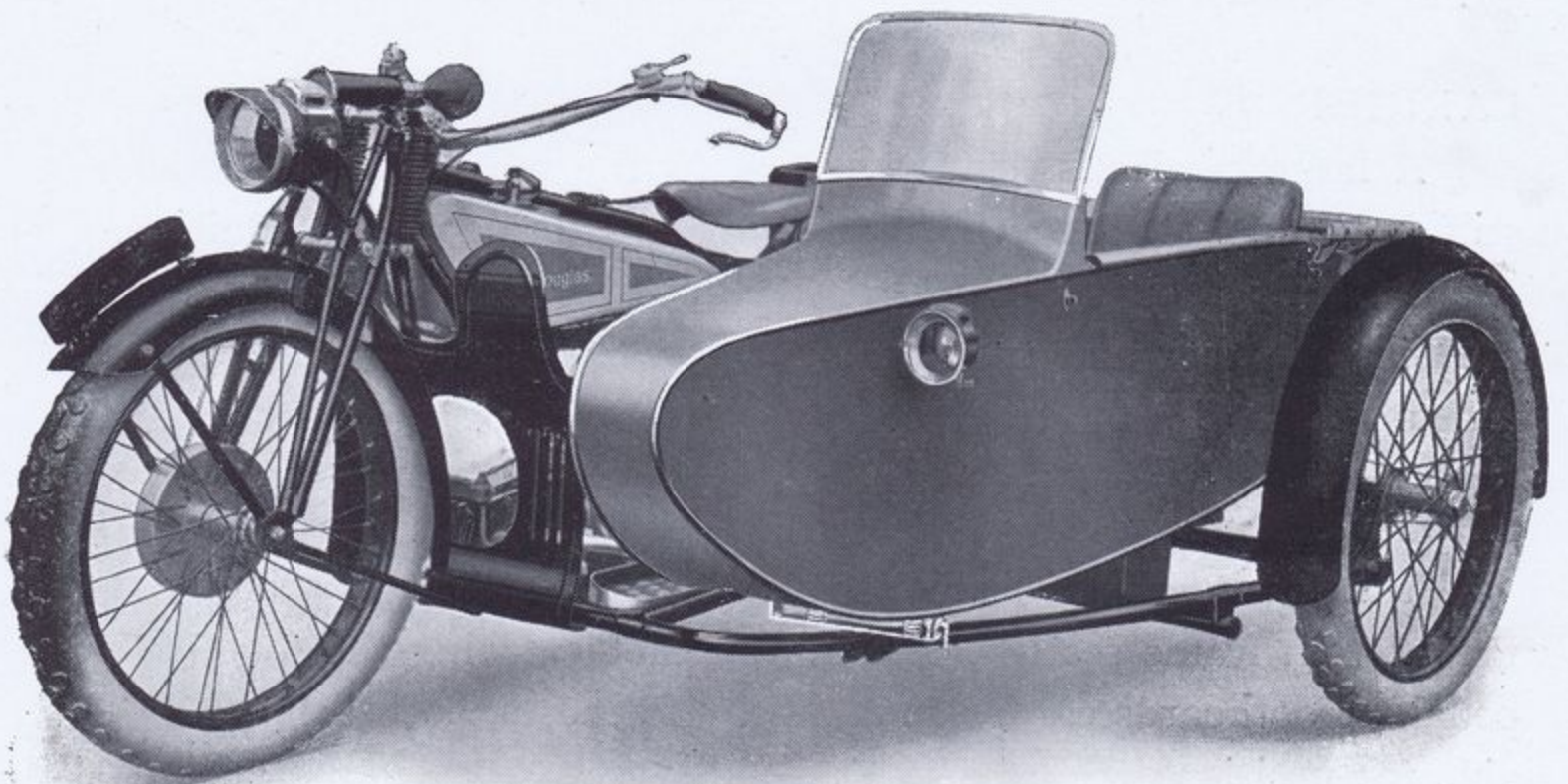
Special Gear Ratios of approximately 15—1 are also available for hilly country.

FRAME.

Made from special butted steel tube, combines strength and rigidity with light weight. Steel lugs are used wherever necessary. The frame is of the box or cradle type and provides a rigid mounting for the engine and gear box, the latter being situated above the rear cylinder. The head lug is fitted with taper roller bearings for the steering column, making this essential part practically indestructible. An adjustable steering damper of robust construction is incorporated in the design of the head lug and an adjustment is conveniently situated underneath the handlebar. The petrol tank is mounted upon pressed steel brackets and is insulated from all shocks by four rubber cushions. Saddle fixings are brazed to the frame to take different types of saddles and to give either a racing or touring position. All necessary, generator, gear operation, carrier and other lugs are brazed to the frame to avoid the use of loose clips.

FRONT FORKS.

Of the same pattern as used and tested in the T.T. races. The fork blades are carried on the steering column by steel shackles, a new pattern shackle bolt providing a simple method of adjustment. The shackle bolt threads have been left in their annealed condition to prevent stripped and broken threads. All fork shackle bolts and moving parts are lubricated by the pressure grease gun from central points in the shackles.



O.C. SPORTS COMBINATION.

HANDLEBARS.

Sports or touring bars are brazed into the top of handlebar lug, there being no possibility of the bars coming loose under any circumstances. The hollow steering column provides a conduit for all control wires, which prevents damage to the controls and presents a tidy appearance.

MUDGUARDS.

Of special deep section, are rigidly bolted to the machine, the front guards having flat stays, providing great strength. Regulation number plates are also fitted in correct positions according to the requirements of the law.

CARRIER.

A large carrier is firmly secured to the rear fork ends, and a stiff bracket, bolted to the rear mudguard bridge adds additional support. Lugs on the carrier accommodate two well made strong combined leather and metal tool bags, which provide ample space for all accessories for touring.

FOOTBOARDS.

The footboards are mounted on flexible steel strips bolted to the bottom frame section, a fixing bracket carrying the foot brake pedal. Footboards can be replaced by footrests, both being adjustable for position.

CHAIN GUARDS.

The primary chain guard is of aluminium, secured to the seat lug and engine, and is of large dimensions, giving ample chain clearance. The rear chain guard (front portion) is hinged for the purpose of inspection or removal of gear box sprocket, and a further pressed steel guard provides necessary protection for the back chain and sprocket.

EXHAUST SYSTEM.

An improved type of exhaust pipe is fitted, giving good ground clearance and discharging the exhaust gases into a torpedo shaped aluminium container, the rear end of which is bolted to the stand fulcrum bolt the exhaust has a deep pleasing note.

BRAKES.

The DOUGLAS low pressure braking system is used, combining a controllable self acting principle with exceptionally low operating pressures. All brake parts are absolutely interchangeable. The expanding steel band is able to bring into operation over 25 square inches of renewable frictional material. The brake bands are securely held by means of tension springs to the anchorage plate, which avoids all rattling of the internal mechanism.

The brake band anchor plate is arranged to accommodate a series of felt washers, which definitely excludes the entry of oil and grease from the wheel bearings into the brake. The brake operation is so arranged that without any internal adjustment, the whole of the frictional lining can be used up to its safety margin.

A most important point in the design is the whole of the braking strains are taken by the frame tubes—or in the case of the front brake, the fork blades—and not through the brake anchor plate.

KICKSTARTER.

A strengthened kickstarter, neatly arranged inside the timing chest of the engine, greatly facilitates starting, and being totally enclosed is not interfered with by the action of mud and water.

FINISH.

All enamel parts are subject to an anti-rust process, after which they receive three coats of best black enamel and stoved to a hard durable finish. The tank is attractively painted in aluminium with blue panels, and all bright parts are heavily plated nickel and buffed to a high polish.

Messrs. Douglas Motors reserve the right to alter any part of this specification without notice.

PRICES.



O.C. TOURING COMBINATION	..	..	..	£87 : 0 : 0
O.C. TOURING SOLO	..	..	..	£70 : 0 : 0
O.C. SPORTS SOLO (aluminium pistons)			...	£72 : 0 : 0
O.C. SPORTS COMBINATION	..	..	..	£86 : 0 : 0

Extras for Combinations—

TOURING MODEL—Screen and Dash	..	..	..	£2 : 15 : 0
Luggage Grid	..	..	..	£1 : 0 : 0
Hood	..	..	..	£2 : 15 : 0
Stand	..	..	..	£1 : 5 : 0
Sports Model —Screen	..	..	..	£1 : 15 : 0
Luggage Grid	..	..	..	£1 : 0 : 0
Hood	..	..	..	£2 : 15 : 0
Stand	..	..	..	£1 : 0 : 0

GUARANTEE

A Reproduction is supplied in the license of each motorcycle.

We give the following guarantee with our motorcycles instead of the guarantee implied by statute, or otherwise, as to the quality or fitness of such machines for the purpose of motorcycling: any such implied guarantee being in all cases excluded. In the case of machines which have been used for "hiring out" purposes or from 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 material and workmanship; but this guarantee is to extend and be in force for three months only from the date of purchase, and damages for which we make ourselves responsible under this guarantee are limited to the replacement of any part which may have proved defective.

WE UNDERTAKE, subject to the conditions mentioned below, to make good at any time within three months any defects in these respects. As motorcycles are easily liable to derangement by neglect, or misuse, this guarantee does not apply to defects caused by wear and tear, misuse or neglect.

The term "misuse" shall include, amongst others, the following acts:—

- I. The attaching of a sidecar to the motorcycle in such a manner as to cause damage, or calculated to render the latter unsafe when ridden.
- II. The use of a motorcycle, or of a motorcycle and sidecar combined, when carrying more persons, or a greater weight, than that for which the machine was designed by the manufacturers.

Any motorcycle sent to us to be plated, enamelled or repaired, whether the repairs are required for the purpose of making good the defect 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 our motorcycle or in any part replaced 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 the purchase, or the date when the alleged defective part was replaced, 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, etc., or of any component part supplied to the order of the purchaser differing from our standard specification, supplied with our motorcycles or otherwise.

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 debt, 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.

Conditions of Sale. All Douglas motorcycles are sold under the guarantee and conditions mentioned on this page, and the specialities of other firms, such as tyres, belts, electrical fittings, etc., are outside our warranty.

Douglas Motors reserve the right to alter this specification without notice.

DOUGLAS MOTORS LTD.

KINGSWOOD, BRISTOL, ENGLAND.

Telephone : Kingswood 213.
Telegrams : Douglas, Kingswood, Glos.
Works : Kingswood, Bristol.
Showroom : Tramways Centre, Bristol.
Telephone : Bristol 7250.
London Address : 39 NEWMAN STREET, W.1.
Telephone : Museum 4476.
Service Dept. : Oxford Mews, Titchborne Street,
Edgware Road, W.2.

Telephone: Paddington 5601
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