

Advance Details of New Models

Matchless Models to have Interconnected Brakes: A Wide Triumph Range: More Ascot Pullin-Refinements.



INSTRUMENT PANELS AND CHROMIUM.

Striking Standard Features of New Matchless Models.

INTERCONNECTED brakes, dry-sump lubrication, and chromium plating—these are but three of the many new Matchless features. Improvements have been made throughout the whole of the standard range, so much so that the 1930 models represent a great advance over their predecessors.

The range includes five side-valve machines and four o.h.v.s. Three of the side-valves are single-cylinders—of 246 c.c., 498 c.c., and 586 c.c.—and two are 990 c.c. Vee-twins, one a touring model and the other a sports model. All the o.h.v.s are "singles" with push-rod operation of the valves, the sizes being

246 c.c., 347 c.c., and 495 c.c. (the last-named is produced as both a sports and super-sports model).

Unquestionably the most striking feature of the range is the new finish. The tanks, which now hold $2\frac{1}{2}$ gallons, are chromium-plated, and have a white panel on each side, lined in black. This, combined with the chromium plating of the cycle fittings, results in a particularly smart appearance. No carrier is fitted as standard to any model, a lifting handle being provided to facilitate operation of the rear stand. Carriers can, of course, be obtained, at an extra charge of 15s.

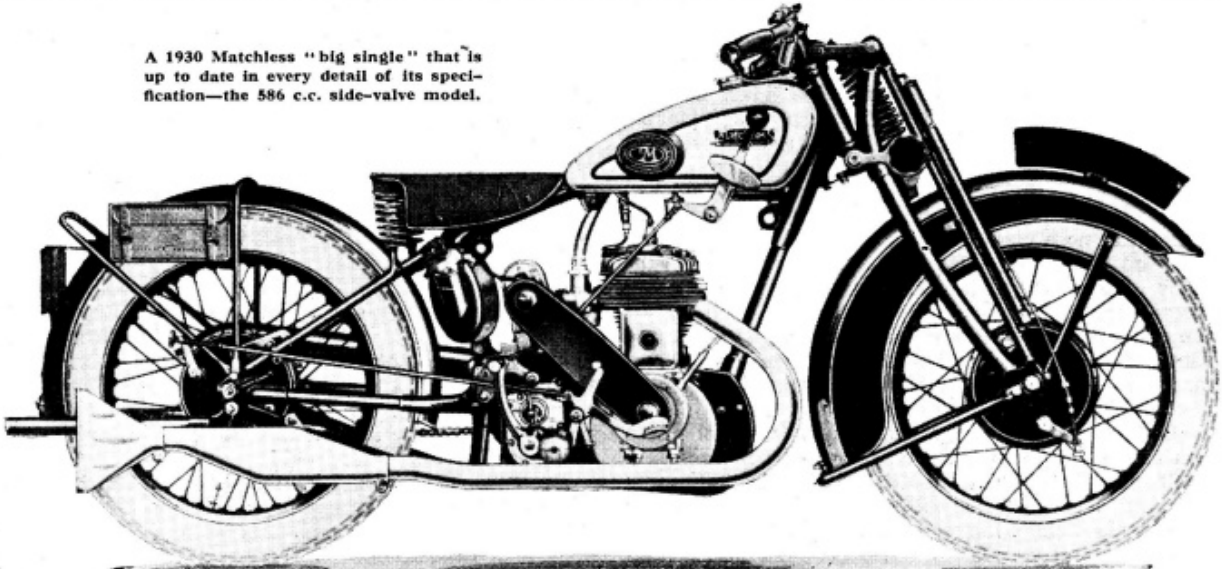
In general design the side-valves are

very similar. The engines are of a new type with cast-iron turbulent cylinder heads and enclosed valve gear, and are said to develop considerably greater power than those they replace. A seven-bolt fixing is used for the cylinder heads, the joint being sealed with a copper-asbestos gasket. The sparking plug is placed approximately in the centre.

Valve gear enclosure is carried out neatly by means of a box-like extension of the cylinder casting, access to the tappets being by a detachable chromium-plated cover held in position by a knurled hand nut.

Other alterations include stiffened crank

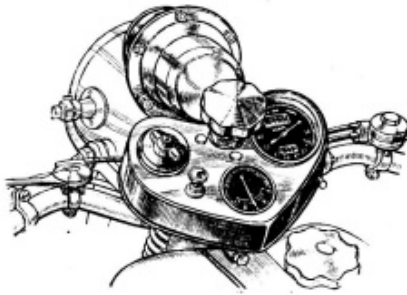
A 1930 Matchless "big single" that is up to date in every detail of its specification—the 586 c.c. side-valve model.



cases, heavier flywheels with shouldered parallel crank pins, the use of split-skirt, anti-slap pistons, carrying a scraper ring, and more lavish finning of the cylinders. The use of shouldered crank pins has been brought about by experience at Brooklands, where it has been found that taper pins are not entirely satisfactory. The new arrangement is simple in the extreme; each flywheel has a ground face, which is pulled up against a ground face on the pin.

Lubrication is particularly well carried out. A reciprocating and rotating plunger is driven from the timing spindle by a spiral skew gear, one end of the plunger drawing oil from the half-gallon oil tank on the seat tube and feeding it to the engine, and the other returning the oil to the tank. There are no valves or springs—merely ports cut in the plunger—and only two short external pipes.

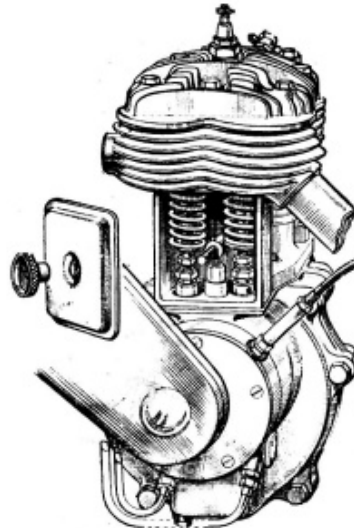
On the feed-side oil is passed to the space around the skew gear and then goes *via* three different paths: (1) To the big-end bearing through the timing spindle, which is hollow; (2) through the timing spindle to the timing case; and (3) to the cam wheel bush and on *via* three small holes in the cylinder casting to the cylinder walls.



The heart-shaped instrument-board.

This lubrication system is standard on all models.

Another standard feature of the range is interconnected brakes. Attached to the pedal is a short lever extending downward; this carries the nipple of the front brake cable, the stop for which is screwed into an extension of the pedal mounting. Since the footrest is fixed alongside the stop, there is the possibility of damage if the machine falls over; hand operation of the front brake would, of course, still be available and the backlash caused by the bending of the stop could easily be taken up. There is separate hand-nut adjustment for the hand and foot control of the front brake, also a hand-nut adjuster for the rear brake. Eight-inch brakes replace the 5½in. ones employed on the 498 c.c. model.



Enclosed valves and a very tidy arrangement of the oil pipes are to be found on all the Matchless side-valve engines.

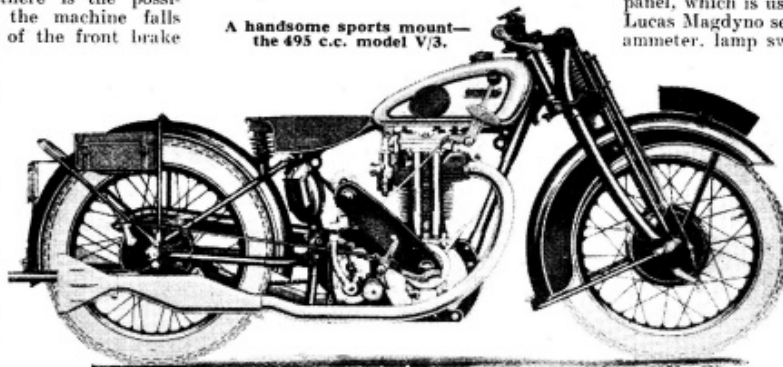
A new front fork is fitted on all except the "two-fifty" machines. Brazen fork blades are used in conjunction with longer spindles and hand-adjusted shock dampers. Each blade has its damper, adjustment being by a single hand wheel on the off-side. Since the lower fork links will not remain truly parallel when the dampers are tightened, the inner plates of the dampers are mounted on spherical seatings so that the whole frictional area of the dampers remains in action.

A plain diamond frame is used on the "two-fifty" models, and a similar frame with the torque stays on the "five-hundred" side-valve and the "three-fifty" o.h.v. In the case of the 495 c.c. overhead-valve machines and the larger side-valves, however, stout steel plates run from the front ends of the torque stays to the front engine plates, so providing, in effect, a loop frame.

The "two-fifty" is fitted with 25in. x 3in. Palmer tyres, but all the other models are equipped with tyres of 26in. x 3.25in., while 27in. x 4in. tyres can be obtained at an extra charge of 10s. per wheel.

All the overhead-valve engines have

A handsome sports mount—the 495 c.c. model V/3.

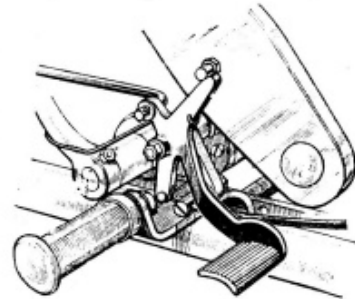


a new cylinder head of better shape. The finning, too, has been improved, and there should be no possibility of a hot spot immediately beneath the exhaust ports. Another improvement is the adoption of a three-bolt mounting for the rocker box with larger bearing surfaces to ensure greater rigidity.

Throttle stops are fitted to all models, Amal carburettors with lever control being standardised throughout; other standard fittings are Sturmey-Archer gear boxes, Lucas magnetos, and Lyccett saddles.

The following is the list of standard models with their prices: "R/4," 246 c.c. side-valve, £37 10s.; "R/6," 246 c.c. two-port o.h.v. model, £40; "T/5," 498 c.c. side-valve, £45 10s.; "T/S2," 347 c.c. two-port o.h.v., £48; "V/3," 495 c.c. two-port o.h.v., £53 10s.; "V/3 Special," 495 c.c. o.h.v., £58 10s.; "V/6," 586 c.c. side-valve, £49 10s.; "X/2," 990 c.c. twin-cylinder, £60; and "X/R2," 990 c.c. sports twin-cylinder (with chromium-plated wheels and nickel-plated cylinders), £62 10s.

A touring, a sports, and two two-seater sidecars are available, the prices being £15, £16, £22, and £29 10s. The last-named has a saloon body with a sliding roof.



How the brakes are interconnected.

Certain standardised equipment can be fitted. The cost of acetylene lighting set and horn is £2 10s. 6d. (except in case of the 250 c.c. models, when the price is £1 19s.), and of a gear-box-driven speedometer £2. All electrically equipped machines will be fitted with an indirectly illuminated instrument panel, mounted over the middle of the handle-bars. The panel, which is used in conjunction with a Lucas Magdyno set, carries a speedometer, ammeter, lamp switch, panel switch, and steering damper knob. The additional cost, including lighting set (with Lucas two-beam head lamp), speedometer, and electric horn, is £8 2s. 6d. The set cannot be supplied for the "two-fifty" models, nor can it be supplied without speedometer. For the 250 c.c. machines there is the ordinary Lucas Magdyno set at £5 10s.