

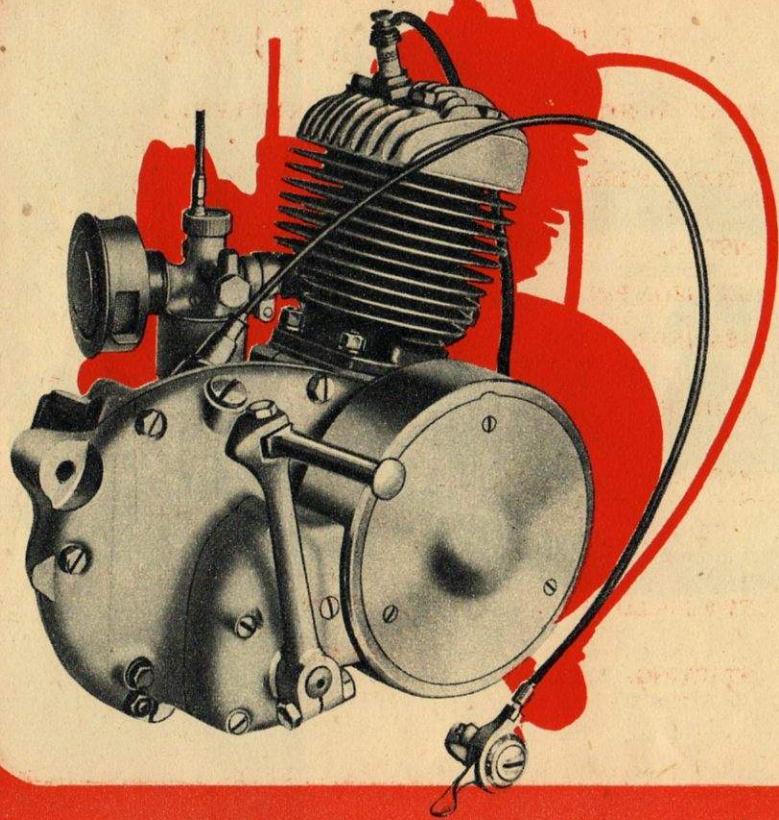
1949 VILLIERS

25 NOV 1948

THE

Villiers

MARK I.E.
ENGINE &
TWO-SPEED
GEAR UNIT



Villiers

MARK I.F MODEL

This is a 98cc Two Stroke engine built in unit with a two-speed gearbox, the drive from engine crankshaft to clutch being by an endless roller chain running in an oil bath case. The cast iron deeply finned cylinder has one exhaust and two transfer ports of unique design, the carburettor being mounted on a stub at the rear.

SPECIFICATION

BORE and STROKE. 47 mm (1.85 in.) x 57 mm (2.24 in.) Capacity 98cc (5.98 cu. in.).

CYLINDER HEAD. Aluminium detachable, 14 mm Sparking Plug.

PISTON. Aluminium, flat top, two compression rings.

GUDGEON PIN. Floating, held endways by circlips.

BEARINGS. Ball Bearings to crankshaft and clutchshaft. Roller bearing big-end.

CLUTCH. Two plate cork insert type operated by lever on handlebar.

RATIOS. Engine to clutch 1—2.47. Gearbox, top gear 1—1, Low gear 1.54—1. Final drive sprocket 14 teeth x $\frac{1}{8}$ inch pitch to suit "Coventry" Chain No. 112045. Chainline 2 $\frac{1}{2}$ in.

TWO-SPEED GEAR. Constant mesh gears, sliding dog operated by control lever on handlebar.

STARTING. By kickstarter with folding pedal.

CARBURETTER. Villiers "Junior," single lever control, latest type air cleaner with Strangler for easy starting.

MAGNETO. Villiers latest pattern Flywheel Magneto providing current for ignition and lighting. This magneto has built-in lighting coils giving alternating current which is rectified for charging a 6 volt accumulator carried on cycle.

LIGHTING SET. Head lamp, with 6V, 12/12W main bulb controlled by dipswitch, and a 6V, 3W parking light. Tail lamp, 6V, 3W bulb.

LUBRICATION. Engine. 1 part Castrol Patent XL Oil to 16 parts petrol thoroughly mixed before putting in tank. **Gearbox and Chaincase.** Castrol "D" Oil filled to level plug fitted.

WEIGHT. Engine and gear unit with Flywheel Magneto and Carburetter only 38 lbs. approx.

MARK I.F. MODEL

This entirely new engine has been designed for the Ultra Lightweight Motorcycle—a small compact machine safe to ride, easily handled and stored. The Two-Speed Gear which is operated by a flick of the thumb on the handlebars enables the machine to climb any hill. All controls are mounted on the handlebar and the engine is started, without effort, by a foot pedal. For night riding the 12-watt headlamp, operated from the Flywheel Magneto, provides adequate illumination. Very economic petrol consumption gives approximately 140 miles to the gallon.



Are now nearing their
FIRST MILLION

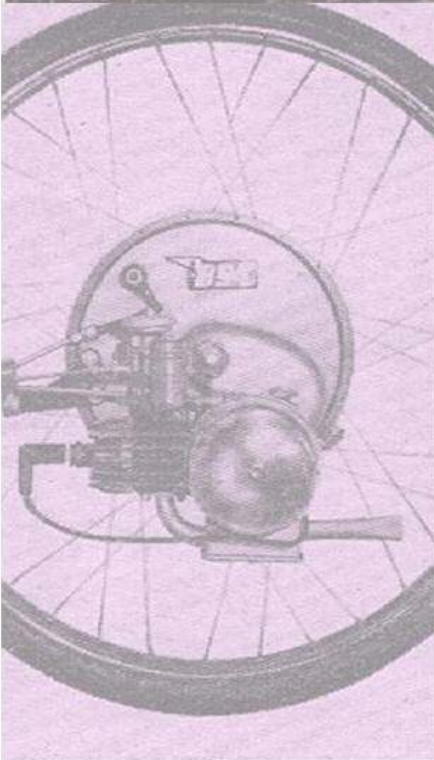
ENGINES

THE VILLIERS ENGINEERING CO. LTD., WOLVERHAMPTON, ENGLAND

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Grams : Villiers, Wolverhampton Code : Bentley's

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