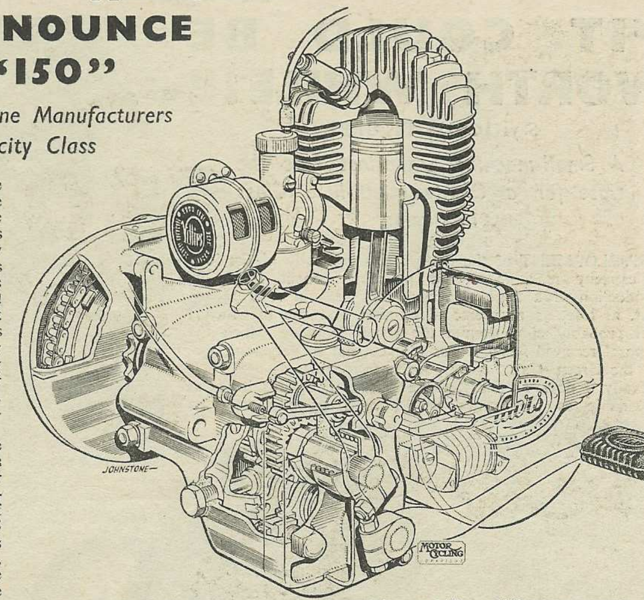
VILLIERS ANNOUNCE A NEW "150"

Wolverhampton Two-stroke Engine Manufacturers Revive a Popular Capacity Class



"Motor Cycling's" cut-away drawing of the new 147 c.c. Villiers power unit.

FROM next week, when the first of the 1955 manufacturers' programmes is due to appear in *Motor Cycling*, there will be numerous references to a new "150" Villiers engine. Appreciating readers' desire for early information about anything new, the Villiers Engineering Co., Ltd., have extended to this journal advance facilities for illustrating and describing the engine in question. This unit supersedes the 122 c.c. 12D pattern and it is probable that manufacturers who previously have catalogued a motorcycle powered by that unit will, next season, list a similar machine, stepped up in capacity to 147 c.c., which is the exact size of Villiers' latest product, labelled as the C30.

For newcomers to the motorcycling game it is appropriate to say that the engine size is not new in the sense of there having never previously been a "150" made at Wolverhampton. Contrariwise, a power unit of identical bore and stroke dimensions, i.e. 55 mm. by 62 mm. came from the Villiers Engineering Co., Ltd., some 20 years ago, and its popularity then coincided with the introduction of a special Road Fund tax rate of 12s. 6d. (now 17s. 6d.) for the 150 c.c. motorcycle class. Many motorcycle insurance companies also catered for the class by quoting special premiums.

This old 147 c.c. Villiers model, which was of the three-port, deflector-top piston type, gave way to a 148 c.c. version, but the entire class became outmoded later by the introduction of the flat-top piston 122 c.c. 10D, later the 12D, which, because of its more advanced design, had greater efficiency.

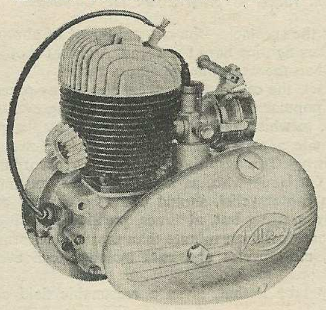
Now the natural sequence has been the development of a "grown-up" 12D with the old 147 c.c. engine dimensions but possessing the modern character of the "D"-type unit. Indeed, at first sight it would seem that the D12 and C30 units are almost identical, and that a change of cylinder and piston would suffice to increase the cubic capacity of an existing 122 model to 147 c.c. It is understood, however, that the 5 mm. increase in bore dimension necessitates a larger crankcase mouth aperture and, therefore, the lower half of the engine, as well as the cylinder, is an entirely new casting.

In other essentials, however, the "D" specification has been almost wholly preserved. The crankshaft and big-end assembly follow current Villiers practice; the shafts are supported on the drive side by two ball-journal bearings, with a single ball bearing on the flywheel side. Villiers' long-established flywheel generator is used and the output can be utilized in either A.C. or D.C. form. The C30 has a new clip-on flywheel cover—common to all 1955 models—with a redesigned Villiers motif. Most sensibly the cover, when clipped into position, fits against a rubber-ring insert, giving essential weatherproofing to the contact-breaker components.

In standard form, the C30 engine has a compression ratio of 8.25 : 1; a Villiers S19 carburetter is fitted. New, is the integral stub for the carburetter. A departure is made also in the sprocket sizes for the C30 which differ from those of the "D" model. They are, engine 23t; clutch 51t and, final-drive, 15t. A 44t rear wheel sprocket is recommended by Villiers, the combination providing a top gear of 6.5 : 1. The internal reductions of the standard three-speed gearbox are 1, 1.34 and 2.53 : 1.

The standard C30 is available at present in three-speed form only. There is, however, a competition version, known as the C29, which has a higher C.R. and is fitted with the Villiers S25 carburetter and a four-speed gearbox. While Villiers do not claim that this competition version is in any way tuned for speed, each power unit will receive special attention in the precision matching-up by hand of piston and port locations to ensure best possible performance. Competition models are to be equipped with the high-output ignition coils introduced last year and will also have the special long-dwell flywheel cam, found by experience to provide more efficient ignition at high r.p.m.

Those features, of course, are part and parcel of the general Villiers competition specification to be dealt with, in conjunction with the remainder of the 1955 Wolverhampton-made two-stroke range, in *Motor Cycling's* September 9 issue.



(Left) Despite its external similarity to the 122 c.c. Villiers engine, the compact "150" employs an entirely new crankcase casting as well as a larger cylinder and piston. (Right) The power curve of this latest addition to the Villiers range of two-strokes.