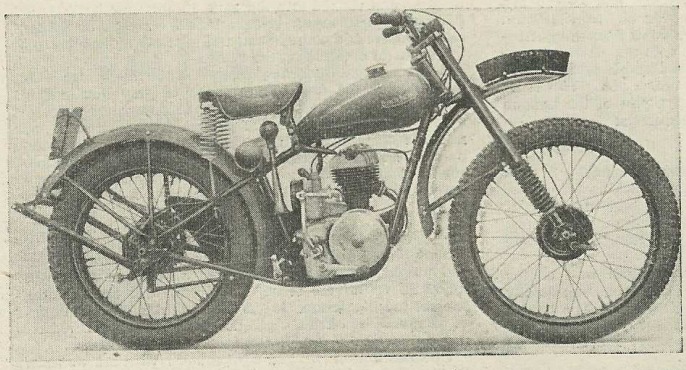
Impressions of Current Models

The 197 c.c. COMPETITION Model "FALCON 60" FRANCIS-

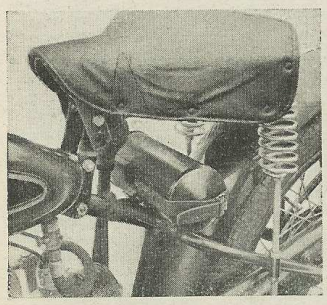


A Villiers-powered Lightweight Trials Mount which has proved itself to be a "Winner" in its class

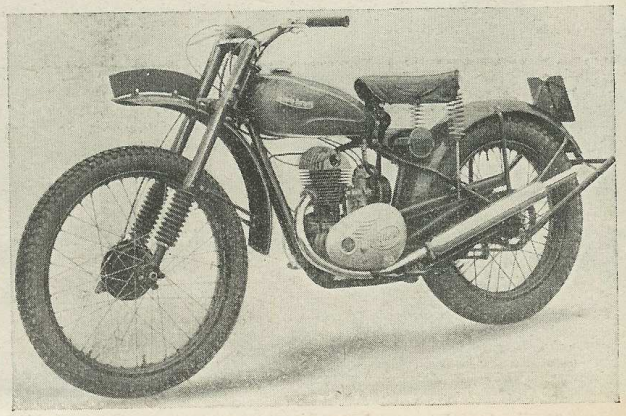
(Left) The offside of the "Falcon 60" model in its competition form. As shown, and as tested by "Motor Cycling," a 4-in. rear tyre figures in the specification which normally includes a 3.50-in. cover.

"Motor Cycling's" Midland man, Dennis Hardwicke, deliberately aviates the Francis-Barnett's front wheel in order to lift the machine out of a water-hole.

Negotiating the ruts, mud and water of a notorious Midland trials section, well known to competitors as "Hobgoblin," near Fillongley.



(Above) The method of saddle adjustment. (Right) A three-quarter view of the machine showing the remarkable mudguard clearance.



BARNETT

FOR 30 years the famous concern of Francis and Barnett, Ltd., has occupied a leading position among motorcycle manufacturers who specialize in building road-going utility lightweight two-strokes. But for a great many years the Francis-Barnett catalogue has contained nothing with pretensions to being a trials model, although from time to time private enthusiasts have successfully adapted standard machines to that purpose.

Judge, then, of the surprise which was felt when, in the winter of 1949-50, a well-known rider appeared in a popular open-to-South-Eastern Centre trial on what was obviously a works-prepared 197 c.c. Francis-Barnett. His performance was most impressive on what subsequently transpired to be the prototype of a machine destined to place these Coventry constructed two-strokes high up among the cup winners.

As an obvious corollary, it was not long before this 197 c.c. trials prototype was again in action—and with even greater success. On one of these competition models, Jack Botting put up the best class performance in the 1950 "British Experts." Then, in 1951, Brian Martin secured the 125 c.c. class awards on a smaller machine in the Victory, Kickham and Mitchell open trials. It will be remembered, also, that in the recent "Southern Experts" Martin and his "tiddler" made the *only* clean climb of the notorious Empshott Stairs, beating the well-established *maestri* riding 250, 350 and 500 c.c. machines.

From such a stud, then, are bred the 122 c.c. "Falcon 59," and 197 c.c. "Falcon 60" Francis-Barnett trials mounts which appeared at the 1951 Earls Court Show, and an early opportunity was taken by a "Motor Cycling" man to obtain impressions of one of the larger-engined models. What it is capable of doing has already been convincingly demonstrated by first-class trials riders; it was therefore merely a matter of finding out how the model would behave in the hands of the ordinary "man in the street," or rather "man in the section," who had no special claims to "gold" standards.

First, the "Falcon 60" looks efficient for its job. Clearly, much experienced thought and painstaking work has gone into its design, always with specialized objectiveness. Mudguards, particularly that at the front, which is attached to the sprung part of the forks, have ample clearance. The riding position with reinforced, set-back footrests, is ideal for a man of average stature and, at 7 ins., the ground clearance is entirely adequate.

There is no central stand. Instead, a massive rear stand is provided and held up, when not in use, by a finger-operated nut. The saddle is adjustable for height and beneath it is fitted a cylindrical tool-box and bulb horn. Rubber bellows encase and protect the sliders of the non-hydraulic, telescopic front forks.

The power unit is the familiar Villiers 6E two-stroke built in semi-unit with the three-speed foot-operated gearbox. Primary transmission is by the usual non-adjustable pre-stretched chain, carried, of course, in a cast aluminium oilbath case, the cover of which is readily detachable.

In general detail the engine, with its light-alloy cylinder head and flat-top piston, follows standard Villiers practice, but there are two very noteworthy exceptions. The compression-ratio is increased to 8.4 to 1, thus boosting the maximum power output to 9.4 b.h.p. at 4,250 r.p.m. Additionally, the carburetter is a Type 76, top-feed Amal instrument. This choice of carburetter is in no way a reflection upon the pattern usually fitted, but provides greater opportunity for finer setting throughout the operational range which trials men demand in order to suit varying conditions. A further interesting detail is the special Villiers waterproofed flywheel magneto.

Gear ratios can be varied to suit the customer, but on the example handed to "Motor Cycling" a 46-tooth rear sprocket was fitted, the final ratios being 6.8, 11.57 and 22 to 1. Internal gearbox ratios are, of course, fixed. To enable a 4-in. rear tyre to be accommodated, the engine of the "Falcon 60" is offset in the frame and such a tyre was fitted to the machine used, in place of the 19-in. by 3.50-in. cover which appears in the standard specification. The front tyre was retained at its normal 21 ins. by 2.75 ins.

A Lively Engine

"Hacking" the Francis-Barnett by road to its natural element—trials going—soon revealed that the extremely light weight of 178 lb., plus the liveliness of the high-compression engine working on its trials gear ratios, made the "Falcon 60" a most snappy and fascinating machine to ride. That fascination became enhanced when it was taken through trials sections typical of those with which a competitor would be likely to be faced.

Space does not permit of a detailed description of the way in which the machine handled over various kinds of "roughery," but an example is provided by its behaviour on one very well-known hazard—"Hobgoblin," used in the Manville Cup Trial. Situated near Fillongley, not far from Coventry, it is one of the muddiest, wettest, ruttiest, clay sections in a part of Warwickshire renowned for that sort of trials country.

Tyre pressures, which had been kept at 20 lb. in the front and 18 lb. in the rear during the road work, were dropped to 12 lb. and 8 lb. respectively, upon essaying a foray in "the fat."

On the occasion in question, "Hobgoblin" lived up to its name; two or three days of dry weather had reduced considerably the moisture content, leaving the clay at its stickiest; some wheel-grip (not a great deal) was to be found at the bottom of two deep ruts, but elsewhere it was at a premium.

There are several ways in which "Hobgoblin" can be used. One can go straight up the slope from bottom to top; one may navigate a passage through the pool at the lower end, or one may use the section as a downhill hazard, culminating in the pool

Our man tried all these methods on the "Falcon 60" Through choosing the wrong rut as a path, an ascent was made which would have earned the word "untidy" in his notebook had he been fulfilling his more usual function at this spot A momentary mistake led him into a deep, muddy cross-gully, the emergence from which reflected greater credit upon the Francis-Barnett than it did upon the rider! A second attempt was made, more carefully this time, and without fault, the small engine pulling manfully and two-stroking steadily. The return trip was completed without incident, the brakes being treated gingerly and the compression used to retard progress as required.

A diversion into the pool came next. When locking over to get out of the rut it was found that the rider could balance, feet up, with the front wheel practically stationary, and he was immediately impressed by the ease with which it was possible to creep slowly, inch by inch, over the treacherous, greasy surface. With this same ease, it was also possible to lower the machine gently into the water-splash and, at the other end, to lift the front wheel skywards, so ready was the response of the Villiers engine to throttle manipulation.

Then came the most difficult piece of "nadgery"—through the pool and along the rut. Here the writer is not ashamed to confess to a couple of quick dabs at the crucial moment—many a better man has done as much under such conditions and on a more powerful model!

Definitely the Francis-Barnett is a very sound piece of trials machinery.

There are times in the life of a competitor when he needs to practice the art of a circus uni-cyclist, and the "Falcon 60's" short wheelbase, coupled with a riding position which disposes the weight towards the rear, assists materially in this achievement, beside aiding the everlasting search for driving-wheel grip. But even such virtue can sometimes be a disadvantage, and for those long in body and leg, a standard pair of handlebars would help to "nail down" the front wheel when required. On the other hand, the telescopic forks have considerable movement in both directions and compensate a great deal for the occasional lightness of the front wheel. The latter, with its 21-in. diameter rim, has increased the standard

(*Continued overleaf*)

BRIEF SPECIFICATION OF THE 197 C.C. "FALCON 60" COMPETITION FRANCIS-BARNETT

Engine: 197 c.c. Villiers Mk. 6E two-stroke high-compression competition engine; bore 59 mm. by stroke 72 mm.; cast-iron cylinder barrel, aluminium-alloy cylinder head; fitted with Amal carburetter and Villiers special waterproofed flywheel magneto.

Transmission: Unit-construction gearbox with positive-stop foot-change mechanism; ratios on machine tested, with 46-tooth rear sprocket 6.8, 11.51 and 22 to 1; chain-line offset to permit 4-in. rear tyre to be used.

Frame: Specially reinforced tubular frame, with widened rear stays. Front forks telescopic, containing stiffened three-rate springs giving extra front wheel clearance; clip-up rear stand.

Wheels: Fitted with Dunlop "Trials Universal" tyres; 21-in. by 2.75-in. front, 19-in. by 3.50-in. rear; rims WM1-21 front, WM2-19 rear; 5-in. brakes front and rear; both hubs with journal bearings.

Tank: Welded steel fuel tank, capacity 2¼ gallons, recessed to give good steering lock; 1-pint reserve.

Dimensions: Overall length, 79 ins.; wheelbase, 49 ins.; saddle height, 32¼-33½ ins.; ground clearance, 7 ins.; weight, 178 lb.

Finish: Black enamel, with chromium-plated handlebars.

Special Equipment: Smiths speedometer; high, fully adjustable saddle; special, upswept exhaust system; competition-type handlebars; adjustable, rear-set reinforced footrests; air filter; additional Lodge R49 plug; short, lightweight mudguards, giving ample clearance.

Price: £97 0s. 0d., plus £26 18s. 11d. P.T.= £123 18s. 11d.

Extras: Direct lighting set £5 0s. 0d., plus £1 7s. 10d. P.T. = £6 7s. 10d.

Makers: Francis and Barnett, Ltd., Lower Ford Street, Coventry.

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