

ROAD TESTS OF NEW MODELS

98 c.c. D.M.W. Bambi

Attractively Styled Lightweight Scooter Combining Adequate Performance with Real Economy and Excellent Handling

THE many scooter enthusiasts who coveted the prototype D.M.W. Bambi at Earls Court in 1955 were doubtless delighted to learn from *The Motor Cycle* for January 10 that production has started. The first production model (embodying one or two hand-made components because not all the tools had then been completed) was, in fact, the subject of the present test and it created a very favourable impression.

Since two-wheelers with engines of 100 c.c. or less are ridden almost entirely as convenient and economical short-distance transport, the manner in which they achieve that purpose is of far greater importance than is the actual performance recorded against a stop watch. For that reason the performance table in the information panel is abbreviated. The three figures given are indicative of the general liveliness of the machine, its ability to stop quickly in an emergency and its very economical running—all important factors for the utility rider.

At the present time perhaps the most valuable aspect of any road vehicle is fuel economy, and in this respect the Bambi acquitted itself admirably by covering the equivalent of 160 miles on a gallon of petrol at a steady 25 m.p.h. For a gallon of petrol plus the necessary oil the mileage would, of course, be rather greater. That speed was chosen because, being well within the model's compass, it could be maintained against strong headwinds or up moderate gradients; hence it is a speed which would commonly be employed. Over several hundred miles covered mainly in London and on fairly large throttle openings the all-in consumption was around 135 m.p.g. (of petrol), a figure which only a moped would be likely to better in similar circumstances.

The Bambi is powered by the Villiers 4F two-speed unit which, though it is in no sense designed for high performance, nevertheless propelled the machine through traffic at a satisfactory rate. Owing to the low-gear ratio being on the high side in relation to the weight of machine and rider, moving away from rest necessitated careful use of the clutch and a fair amount of slipping. However, the knack was soon acquired and, with the clutch fully home at about 6 to 8 m.p.h., acceleration was adequate. Slightly heavy handlebar-lever action was more than compensated by the smoothness of the clutch engagement on all occasions. The gear-change twistgrip is integral with the clutch-lever body and the drum incorporates three grooves so that the lever cannot be fully released and the clutch engaged until the required position (low, neutral, high) has been selected.

Both low and high gears were free from noise and gear changing was perfectly straightforward. The downward change could be made without a sound and, with the engine blipped in the usual way, just as quickly as the rider could move the controls. Provided

some deliberation was exercised in operating the twistgrip (to allow engine revolutions to drop as necessary) the upward change was equally silent.

At maximum speed in the gears (i.e., approximately 38 m.p.h. in high and 22 m.p.h. in low) some engine vibration set in but below those speeds the engine delivered its power sweetly right down through the r.p.m. range until the revs were allowed to drop so low that, inevitably, transmission snatch was experienced. On level roads speeds of over 30 m.p.h. were often used and only under very adverse conditions was a little coaxing necessary. On one out-of-town occasion with a following wind a reading of 35 to 37 m.p.h. was held for several miles without complaint from the engine. Though standard-grade fuel was used exclusively, no pinking was experienced. Exhaust noise was always well subdued.

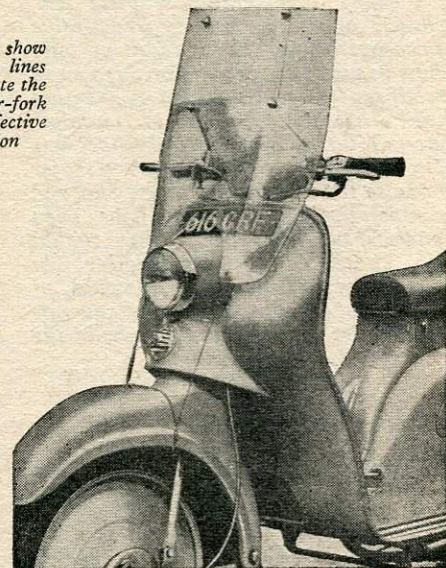
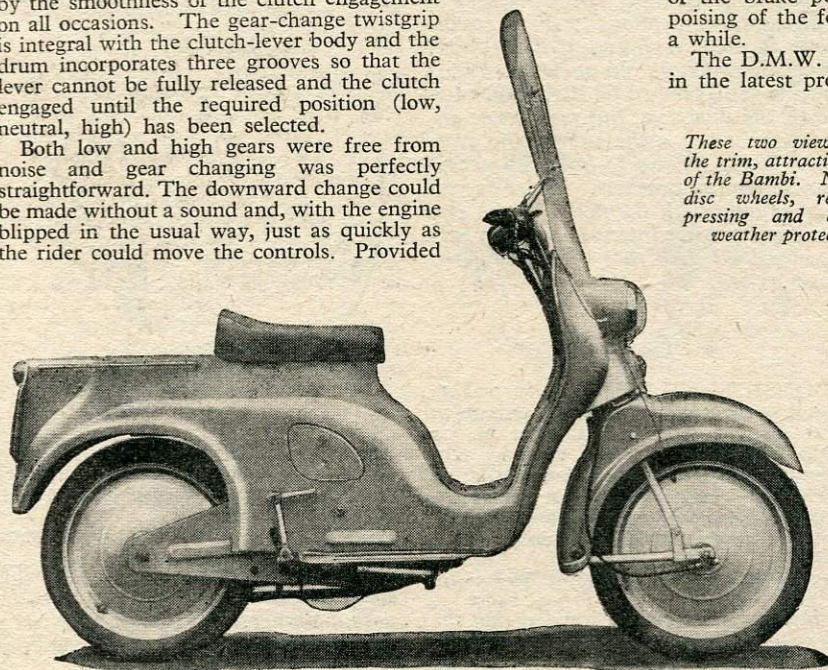
Engine starting was at all times effortless. Even in cold weather, when as many as three or four depressions of the kick-starter might be needed with the engine stone cold, operation of the starter was so light as to require no exertion. Idling when warm was slow and reliable and four-stroking under light load was unobtrusive. At over half-throttle openings the carburation gave signs of richness. A cure was to lower the needle one groove but the pick-up was adversely affected and the richer setting was restored.

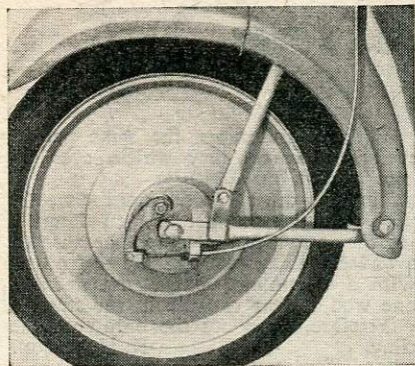
On a machine of the Bambi's type good weather protection is highly desirable since the average utility rider does not wish to bother with special clothing. With that in mind the model had been equipped with a windscreen featuring a transparent apron attached to the mudguard by light elastic cord. The amply high weathershield combined with the screen to provide first-class protection of face, body and legs; only in respect of exposed hands and slight draught around the ankles could any criticism be made.

The riding position, too, was given high marks: the comfortable seat is low enough to suit riders of below average height, yet a tall rider was not cramped. The handlebar is short and well placed, as are all the controls with the possible exception of the brake pedal; as is usual on scooters, the unsupported poising of the foot over the pedal in traffic became tiring after a while.

The D.M.W. reputation for good handling is well maintained in the latest product. Though light at all speeds the steering

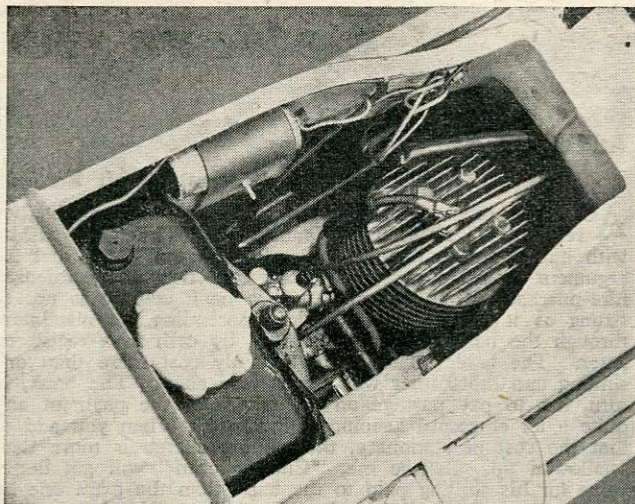
These two views show the trim, attractive lines of the Bambi. Note the disc wheels, rear-fork pressing and effective weather protection





Left: Stanchions of the pivoted front fork are concealed by the mud-guard. A stirrup connects the fork to the Neoprene-cushioned coil-spring suspension unit

Right: Carburettor and plug are reached through hinged side doors but for greater accessibility the seat is raised and the tool tray removed. The parking battery is located just ahead of the fuel tank



felt thoroughly safe and, abetted by good weight distribution and ample ground clearance, made it a real pleasure to take the little machine round corners in an enthusiastic manner. Owing to the exposed side area of the disc wheels there was a suggestion of skittishness in really gusty cross-winds, but at no time was there any cause for concern. On wet roads the model felt encouragingly stable, and slides induced for test purposes were easily controlled.

In comparison with the effective rubber-controlled rear suspension the front springing was noticeably hard—a matter which is being investigated by the manufacturers. As a result of the firmness the short, sharp type of bump made itself felt through the handlebar and, if severe, gave rise to sympathetic noise from the bodywork.

Braking was regarded as ideal for a scooter. As the stopping distance shows, both brakes possessed plenty of bite. Indeed, such was the power available that under crash-stop technique the front wheel was on the verge of locking while the rear wheel could be locked. Yet both brakes were so smooth and controllable that the rider could apply to a nicety the degree of braking required by the conditions of the moment, and that with very little physical effort.

Lighting was amply powerful for the machine's capabilities

though the dipped beam could with advantage have been wider; the facia mounting of the positive push-push dip switch was less convenient than a handlebar fitting. The electric horn was effective by day but barely audible with the lights on.

The double-sided prop stand was most convenient in use and supported the model well even on quite steep cambers. Also appreciated was the low weight which made it easy to manhandle the Bambi or to lay it down on its side as was necessary when repairing a rear-wheel puncture. A practical feature is the flat stowage space for luggage behind the seat. For normal maintenance, satisfactory accessibility to the power unit is provided by the hinged seat and the side doors.

It was with real reluctance that the Bambi was returned to its makers. During its sojourn it had endeared itself by its willingness and excellent road behaviour, its cleanliness in use and the ease with which the showroom finish could be restored. The low fuel consumption, too, was greatly appreciated.

Information Panel

SPECIFICATION

ENGINE: Villiers Mark 4F 98 c.c. (47 x 57mm) single-cylinder two-stroke. Roller-bearing big end; crankshaft supported in ball bearings. Flat-top, light-alloy piston; light-alloy cylinder head with hemispherical combustion chamber. Compression ratio, 8.0 to 1. Petroil lubrication.

CARBURETTOR: Villiers S.12 with twistgrip throttle control, air filter and multi-position, plunger-operated strangler.

IGNITION and LIGHTING: Villiers flywheel magneto with 6-volt direct-lighting coils. Dry battery for parking lights. Miller 5in headlamp with pre-focus light unit and 24/24-watt bulb.

TRANSMISSION: Two-speed gear box in unit with engine; gear selection by left-hand twistgrip. Primary drive by $\frac{3}{8}$ x 0.225in chain in oil-bath case. Single-plate, cork-faced clutch running in oil. Final drive by partially enclosed $\frac{1}{2}$ x 0.192in chain. Gear ratios: high, 7.76 to 1; low, 13.6 to 1. Engine r.p.m. at 30 m.p.h. in high gear, 3,920.

CONSTRUCTION: Main body section and front weathershield built of steel pressings spot-welded together. No separate frame. Engine mounted on rubber.

FUEL CAPACITY: Approximately $1\frac{1}{2}$ gallons with 1 pint reserve.

WHEELS and TYRES: 15in-diameter steel disc wheels carrying 2.50in-section Dunlop tyres.

BRAKES: 4in diameter x $\frac{3}{4}$ in wide front and rear.

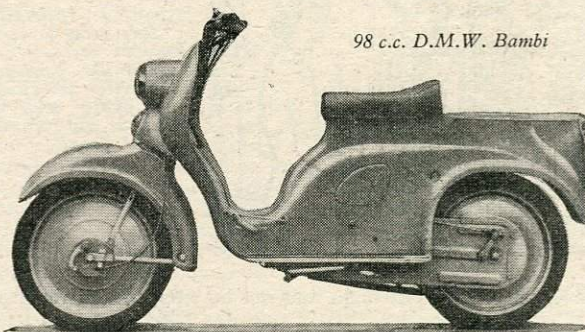
SUSPENSION: M.P.-Earles pivoted front fork with stirrup-actuated single coil spring and Neoprene cushioning rod. Engine, transmission and rear wheel pivot as a unit, controlled by Dunlop rubber spring.

WHEELBASE: 50 $\frac{1}{2}$ in unladen. Ground clearance, 4 $\frac{1}{2}$ in unladen.

SEAT: D.M.W. foam-rubber cushion type; unladen height, 29in.

WEIGHT: 183 lb fully equipped and with $\frac{1}{4}$ gallon of petrol.

98 c.c. D.M.W. Bambi



PRICE: £88 10s. With purchase tax (in Great Britain only), £109 14s 10d.

EXTRA: Feridax windscreen, £2 17s 6d.

ROAD TAX: 17s 6d a year; 4s 10d a quarter.

MAKERS: D.M.W. Motor Cycles (Wolverhampton), Ltd., Valley Road Works, Sedgley, Dudley, Worcs.

DESCRIPTION: The Motor Cycle, 10 January 1957.

PERFORMANCE DATA

ACCELERATION: 0-30 m.p.h., 24.7 sec (conditions, fresh cross-wind, 12 $\frac{1}{2}$ -stone rider).

PETROIL CONSUMPTION: At 25 m.p.h., 160 m.p.g.

BRAKING: From 30 m.p.h. to rest, 35ft (surface: smooth, dry tarmac).

TURNING CIRCLE: 9ft 10in.

MINIMUM NON-SNATCH SPEED: 14 m.p.h. in high gear.

WEIGHT PER C.C.: 1.87 lb.

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