

78 c.c. RALEIGH

ROMA



The Roma is far more eyeable than photographs suggest. The rear-brake pedal protrudes through the engine tunnel

ROAD TESTS OF NEW MODELS

DEVELOPMENT of the ultra-small two-stroke these past few years—particularly in Italy—has pushed ahead fast. Power has been sought at low as well as high engine speeds. The quest for economy has been no less vigorously pursued and the results, as exemplified by the 78 c.c. Raleigh Roma, are little short of remarkable. You know, of course, that the Roma is a Bianchi design, manufactured in this country under licence by the vast Raleigh cycle concern.

In keeping with Italian practice, the gear box is built in unit with the engine, and the whole assembly lies flat, with the cylinder head projecting forward into the air stream. The cylinder is located between the rider's feet under a sleek, above-footboard-level tunnel.

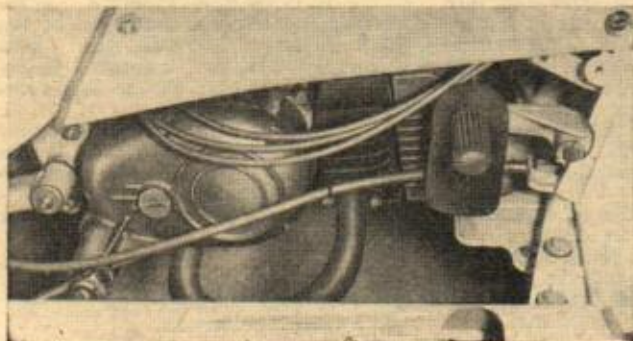
Rubber bushes are used at the attachment points between engine-gear unit and frame. The result is no vibration at any period in the speed range (though there was some initially, due to the mounting bolts having been over-tightened).

In spite of its small engine capacity, the

Roma is a full-size model. And controls conform to the current vogue. A combined clutch lever and gear-change twist-grip is on the left of the handlebar, and a scale marked on the bar indicates which gear is in engagement. On the right-hand end of the bar is the front-brake lever and throttle twistgrip, and a box which neatly houses the light switch, horn push, dip switch and cut-out button. The rear brake is operated from a pedal lying above the right footboard.

Engine starting was simplicity itself, and no particular technique was required to bring the unit burbling to life at the second kick-starter prod from cold, or first time when hot. A rich mixture for cold starting is obtained by depressing a spring-loaded plunger, readily accessible through a hole in the left of the engine cover and protruding through the top of the carburettor mixing chamber. Opening the throttle returns the plunger to its open position. The kick-starter pedal is on the right and can be operated comfortably when the rider is astride the machine.

The engine would idle reliably and unobtrusively with virtually no trace of mechanical noise and very little more from the exhaust. But the real surprises came when the Roma was under way. The power spread was remarkably wide,



Engine and gear box are designed as a homogeneous, compact unit, located in the frame horizontally, with the head facing forward into the air stream. Side and top panels are easily removed for servicing

Attractively Styled Low-capacity Scooter Combining Adequate Performance with Excellent Fuel Economy

especially bearing in mind the engine's small capacity. Starting away from rest, one- or two-up, the clutch could be home within precious few yards. There was immediate power on tap from just above tickover speed.

On one occasion a 1 in 12 main-road hill was surmounted with a two-up load of 24 stones; and second gear (11.1 to 1) was held without the road speed falling below an indicated 20 m.p.h. One-up a start could be made from rest on a 1 in 6 gradient without undue fuss. Even then the clutch was fully in engagement after a few yards.

As with all ultra-small engines, intelligent use of the gear box was essential if the best performance was to be obtained. Normal upward changes were made at an indicated 12 and 26 m.p.h. (the speedometer read approximately ten per cent fast throughout the range).

Gear changing was simple. Both upward and downward changes could be

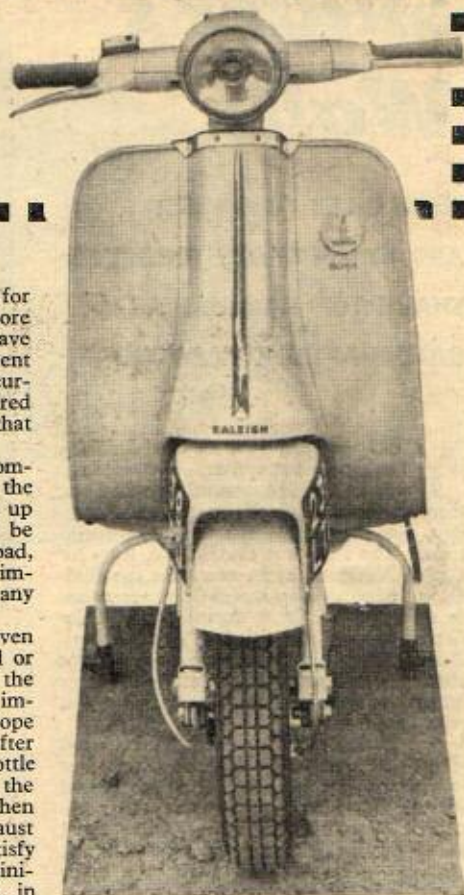
noiselessly achieved without the need for any special technique. However, a more positive location for second would have been an advantage. Unless the movement of the gear-change twistgrip was accurately judged, a glance at the numbered scale on the bar was useful to ensure that the gear was properly home.

More evidence of the powerful bottom-end pulling (and, incidentally, of the smooth way in which the clutch took up the drive) was that the Roma could be ridden away from rest, on a level road, in second gear. The clutch seemed impervious to abuse and did not require any adjustment during the 400-mile test.

Two-stroking was exemplary, even when the engine was under light load or running at a speed over and above the peak-power figure. But even more important, there was ample stamina to cope with long spells of hard work. Mile after mile were covered on near-full throttle without the power unit once showing the slightest sign of stress. As for noise when the model was ridden hard, the exhaust was muted to an extent that would satisfy the most noise-conscious pedestrian. Minimum non-snatch speed was 12 m.p.h. in top gear.

When the scooter was really put through its paces true maxima in the gears were 22, 30 and 45 m.p.h. (the rider adopting a semi-crouch). Used to its limit, the Roma took 8.8s to accelerate from rest to 30 m.p.h. and covered a standing quarter-mile in a mean time of 31s. Comfortable cruising speed was an indicated 40 m.p.h. at which pace the Raleigh seemed content to continue indefinitely.

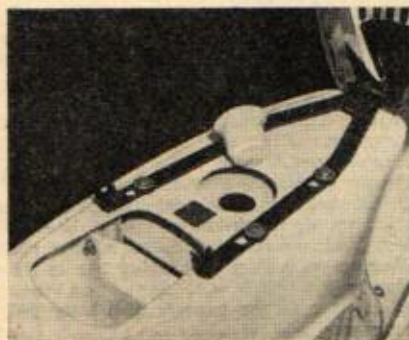
Bearing in mind these extremely creditable performance figures, the fuel consumption is all the more impressive. A sustained 30 m.p.h. gave 160 m.p.g., while at 40 m.p.h. the consumption was 120 m.p.g.



Above: A duct above the front mudguard leads cooling air to the engine. Below: Underseat location of the fuel tank and parcels compartment

SPECIFICATION

- **ENGINE:** Bianchi 78 c.c. (48 x 43mm) single-cylinder two-stroke. Crankshaft supported in two ball bearings; caged roller big-end bearing. Light-alloy cylinder head. Compression ratio, 7 to 1. Petroil lubrication; mixture ratio, 20 to 1.
- **CARBURETTOR:** Dellorto with wire mesh air filter. Direct-operated cold-starting slide automatically released by twistgrip.
- **IGNITION and LIGHTING:** Marelli 6-volt flywheel generator with lighting coils and remote high-tension coil. 4in.-diameter headlamp with 25/25-watt bulb fed direct from generator.
- **TRANSMISSION:** Three-speed gear box in unit with engine; twistgrip control. Gear ratios: bottom, 19.93 to 1; second, 11.1 to 1; top, 7 to 1. Multi-plate clutch with moulded friction facings running in oil. Helical-gear primary drive. Final drive by $\frac{1}{2}$ x $\frac{1}{2}$ in chain enclosed in plastic case.
- **CONSTRUCTION:** Welded tubular frame with pressed-steel weathershield, floor and body panels.
- **FUEL CAPACITY:** 1½ gallons.
- **WHEELS and TYRES:** Quickly detachable and interchangeable pressed-steel wheels with 8in.-diameter divided rims and Dunlop 3.50in.-section studded tyres.
- **BRAKES:** Approximately 4½in. diameter x 1in wide front and rear.
- **SUSPENSION:** Trailing-link front and pivoted rear forks controlled by telescopic units employing rubber in compression.
- **WHEELBASE:** 44½in unladen. Ground clearance, 7in unladen.
- **WEIGHT:** 178 lb fully equipped and with one gallon of petrol.
- **PRICE:** £115 10s including £19 15s British purchase tax.
- **MANUFACTURERS:** Raleigh Industries Ltd., Motor Division, Phoenix Works, Downing Street, Handsworth, Birmingham, 21.
- **WEIGHT PER C.C.:** 2.28 lb.

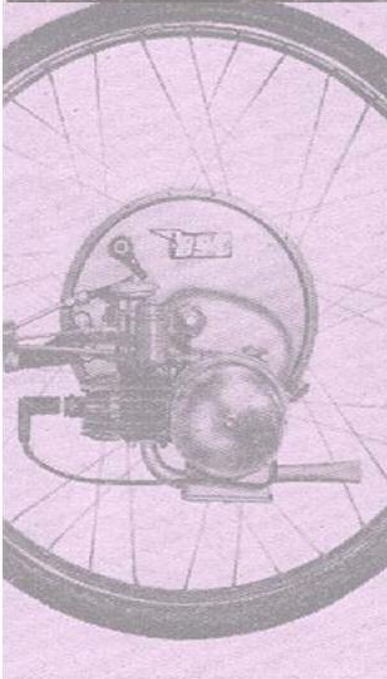


Just as important as performance and economy are steering, roadholding and braking. The Roma proved extremely stable under a wide variety of conditions. Some pitching was experienced on undulating surfaces—attributable probably to the 44½in wheelbase rather than to shortcomings in the suspension (the telescopic units controlling the trailing-link front fork and the rear pivoted fork employ rubber bushes in compression). The scooter could be laid zestfully into corners with the utmost confidence. As for the brakes, a stopping distance of 30 feet from 30 m.p.h. speaks for itself.

Supplied with current direct from the generator, the lights were adequate but unimpressive. No parking light is provided. The horn proved quite ineffective. Both footboards can be lifted away to permit easy access to the engine for routine maintenance jobs.

Although at its best when used for shortish trips, the model proved itself capable of long touring journeys. It is a willing worker with a very modest thirst. And, finished in pearl grey with a contrasting red dual-seat and chromium-plated fittings, the Roma is far more eyeable than photographs suggest.

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