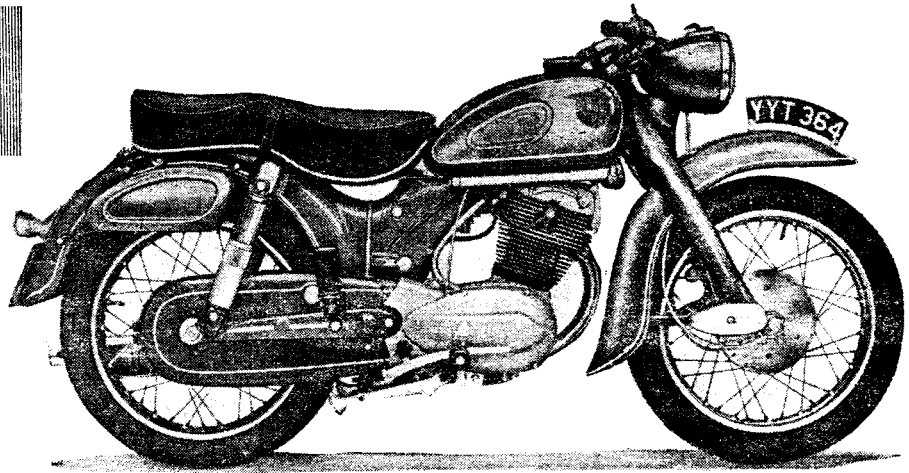


## ROAD TESTS of new models

**AN EXCEPTIONALLY QUIET ROADSTER COMBINING EXHILARATING TOP-END PERFORMANCE WITH FLEXIBILITY AND ECONOMICAL POTTERING**



# 247 c.c. Overhead-camshaft NSU Supermax

WHEN introduced some seven years ago, the 247 c.c. NSU Max set a fashion in flowing lines with its pressed-steel, spine-type frame, shapely mudguards and clean engine-gear unit. It also proved to be a leader in its class in the matter of performance: maximum speed was that of a sports three-fifty; road-holding and general handling showed race breeding; and the power delivery was so quiet that the full potential of the overhead-camshaft engine could be used with impunity.

Latest version of the Max, the Supermax inherits all the charm of its forerunner. The engine, with its unconventional overhead-camshaft drive by eccentrics and connecting rods, is capable of higher revs giving an improved top speed. The leading-link front fork en-

ures first-class handling. Quietness of operation—both mechanically and as regards exhaust—is as marked as on the earlier model.

Principal refinements consist of larger brakes in light-alloy hubs, a dual-seat instead of a nose-pivoted saddle and control of the pivoted rear fork by a pair of adjustable telescopic suspension units in place of a single coil spring with hydraulic damping.

The Supermax has an exceptionally fine engine. Starting it was always easy. Almost invariably the first depression of the kick-starter—mounted on the left side of the machine—brought the engine to life from cold. When warm, the engine could be started with a lazy prod.

In traffic the machine would potter along happily at less than 30 m.p.h. in top

gear and, without change, accelerate smoothly up the scale. On the other hand it could be made to zip up to 40 m.p.h. by dropping down to second and then continue the rocket-like progress in third and, later, top.

Up to one-third throttle opening power delivery was exceptional for a two-fifty. It was lusty enough, for example, for restarting on a 1-in-4 gradient or for cruising at 40 to 45 m.p.h. From one-third to two-thirds throttle there was a distinct flattening of the power curve to the extent that the larger opening produced only about 50 m.p.h. in top gear. At that speed any further opening of the throttle brought in more power with a surge reminiscent of a small racing engine coming on the megaphone.

In restricted areas normal upward

### Specification

**ENGINE:** NSU 247 c.c. (69 x 66mm) single cylinder with a single overhead camshaft driven by twin eccentrics and connecting rods. Double-row caged roller big-end bearing; crankshaft supported in two roller bearings. Light-alloy cylinder head; cast-iron barrel. Compression ratio, 7.4 to 1. Dry-sump lubrication; oil-tank capacity, 3½ pints.

**CARBURETTOR:** Binz, with wire-mesh air filter. Air slide controlled by handlebar lever.

**TRANSMISSION:** NSU four-speed foot-controlled gear box in unit with the engine. Gear ratios: bottom, 21.36 to 1; second, 13.73 to 1; third, 9.53 to 1; top, 6.78 to 1. Multi-plate dry clutch with fabric inserts. Helical-gear primary drive. Final drive by ½ x ⅜ in chain in pressed-steel case. Engine r.p.m. at 30 m.p.h. in top gear, 2,660.

**IGNITION and LIGHTING:** Coil ignition. 60-watt d.c. dynamo driven by right-hand end of crankshaft. Bosch 6-volt, 7-amp-hour battery. Bosch 6in-diameter headlamp with 35/35-watt main bulb.

**FUEL CAPACITY:** 3 gallons, including ¼ gallon in reserve.

**TYRES:** Dunlop (German) Universal: 3.25 x 19in studded front and rear.

**BRAKES:** 7in diameter front and rear in full-width light-alloy hubs.

**SUSPENSION:** NSU leading-link front fork with coil springs and hydraulic damping. Pivoted rear fork controlled by two-position adjustable spring-and-hydraulic telescopic units.

**WHEELBASE:** 52in unladen. Ground clearance, 5½in unladen.

**SEAT:** Denfeld dual-seat; unladen height, 32in.

**WEIGHT:** 371 lb fully equipped and with ¼ gallon of petrol and full oil tank.

**PRICE:** Basic £219 7s 2d; with purchase tax (in Great Britain only) £264 12s.

**ROAD TAX:** £1 17s 6d a year.

**CONCESSIONAIRES:** NSU (Great Britain), Ltd., 134-136, King Street, Hammermith, London, W.6.

#### PERFORMANCE DATA

**MEAN MAXIMUM SPEED:** Bottom: \*29 m.p.h.  
Second: 42 m.p.h.  
Third: 56 m.p.h.  
Top: 74 m.p.h.  
\*Valve float occurring.

**HIGHEST ONE-WAY SPEED:** 76 m.p.h. (conditions: moderate tail wind; 14-stone rider wearing two-piece suit and overboots).

**MEAN ACCELERATION:** 10-30 m.p.h. 20-40 m.p.h. 30-50 m.p.h.  
Second ... .. 5.6 sec 5 sec  
Third ... .. 8.2 sec 7.8 sec  
Top ... .. 13 sec 15.6 sec

Mean speed at end of quarter-mile from rest: 61 m.p.h. Mean time to cover standing quarter-mile: 21 sec.

**PETROL CONSUMPTION:** At 30 m.p.h., 104 m.p.g.; at 40 m.p.h., 80 m.p.g.; at 50 m.p.h., 68 m.p.g.; at 60 m.p.h., 64 m.p.g.

**BRAKING:** From 30 m.p.h. to rest, 39ft (surface, dry tarmac).

**TURNING CIRCLE:** 13ft.

**MINIMUM NON-SNATCH SPEED:** 15 m.p.h. in top gear.

**WEIGHT PER C.C.:** 7.5 lb.

changes were made at 15, 25 and 30 m.p.h. and, clear of restriction, very economical cruising was possible up to 45 m.p.h. For high-speed cruising on the open road upward changes were made at 25, 40 and 50 m.p.h. and the machine would keep going happily at 65 to 68 m.p.h. At 70 m.p.h. a slight vibration tremor could be felt at the handlebar.

The Supermax encouraged the use of wide throttle openings. As mentioned, the surge available from 50 m.p.h. upward in top gear and at lower speeds in the indirect ratios was thrilling to say the least and, more important, the full performance could be used without attracting attention. The machine literally hummed along with very little sound. Those who maintain that a single cannot be effectively silenced must surely blush!

The exhilarating performance is helped by the happy choice of gear ratios. Mounted on the left in continental fashion, the gear lever has rather a long travel and its movement, on the machine tested, was slightly stiff. Each gear engaged with an audible click. Light to operate and positive in action, the clutch withstood a tousing without complaint: its adjustment remained unaffected by six full-throttle standing starts made in quick succession to obtain the quarter-mile figures.

Never was a racing pedigree more evident than in the Supermax. It corners and holds the road as a thoroughbred should. Though the centre of gravity is high and the weight appreciable for a two-fifty, neither was noticeable except on the slowest of corners, and then barely so. Fast bends required no effort. Given light knee pressure for inward inclination, the model sailed round precisely on line. Even on particularly bumpy surfaces the machine could be placed exactly.

Thanks largely to the low unsprung weight, the steering at all speeds above a traffic crawl is light yet possesses a marked degree of self-centring action. The steering damper fitted is superfluous and was never used.

On the firm side at low speeds, the hydraulically damped springing both at front and rear otherwise worked to perfection. All normal road-surface irregularities were effectively ironed out and

there was no pitching. The rear shock absorbers have two-position adjustment, the softer setting for one-up riding, the harder for pillion work. Both solo and with a passenger the suspension did its job well.

The riding position, which is higher than average, proved very comfortable for a 6ft-tall rider. The relationship of the handlebar and footrests to the seat was just right, though a softer and wider seat would have been preferred. Even so, nearly 300 miles could be covered without a trace of fatigue in the course of a normal day.

The gear lever and handlebar controls were conveniently placed, but adjustment of the brake pedal to bring its pad nicely under the ball of the right foot gave rise to a complication: there was insufficient adjustment for the stop-light mechanism to allow the light to function when the brake was applied.

Braking power was deceptive. From high speeds the Supermax could be pinned down into the 30s very quickly indeed; below that the deceleration to a standstill was less impressive because the front brake lost some of its bite. It meant that the tyres could be squealed when travelling fast yet there was no risk of locking the front wheel at low speeds.

The rear brake was powerful throughout the speed range. No adjustment of either brake was required throughout the 700 miles of the test.

Typical of continental lighting, the headlamp main beam had a sharp cut-off at the top. Nevertheless there was adequate light for the full performance to be used at night. The speedometer light operated only when the main bulb was in use. Incidentally, the speedometer reading was accurate at 30 m.p.h. but 3 m.p.h. fast at 60 m.p.h. The horn emitted a loud, clear note of real value for motorway travel.

In rain the shapely mudguards proved most effective. At the end of the test the tension of the enclosed rear chain had not altered and there was not a trace of oil on the outside of the engine-gear unit—though there was a slight weep around the oil-tank filler cap.

The tool kit is adequate for normal maintenance. Rear-chain tensioning is by means of snail-cam adjusters, a feature which facilitates keeping the wheels in alignment. Valve-clearance adjustment entails taking off the fuel tank, which is held by a steel strap.

No machine is smarter than the Supermax. Its finish is in chromium plate and royal blue extensively lined in white.

*Right: Removal of the cover on the gearcase gives ready access to the seven-spring clutch. Below left: The large air filter and intake silencer is concealed by a shapely cover on the near side. Below right: The Bosch battery is located in the near-side tool box; a matching box is fitted on the off side of the machine*

