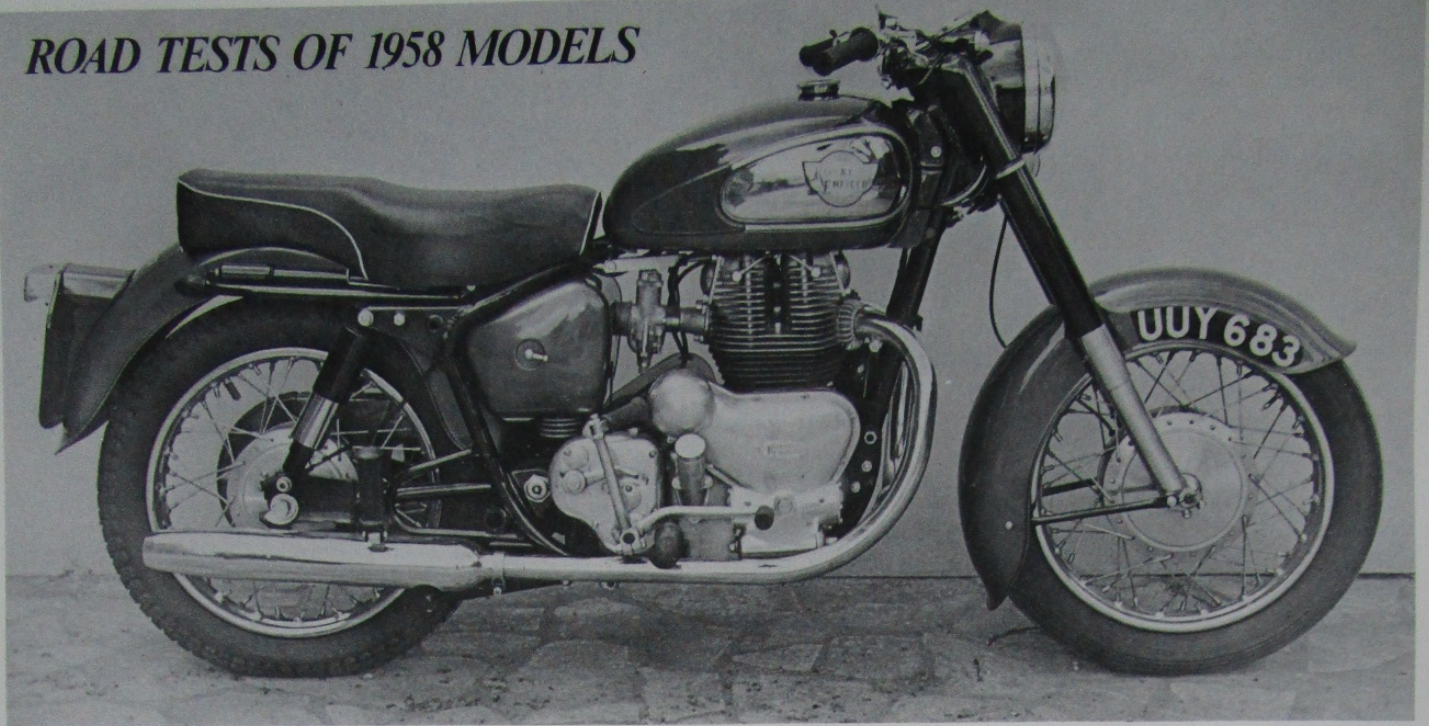


ROAD TESTS OF 1958 MODELS



THE ROYAL ENFIELD METEOR MINOR DE LUXE

*A Compact and Sprightly 496 cc Twin with
17-inch-diameter Wheels and Full Enclosure
of the Rear Chain*

ANNOUNCED in April, the 496 cc Meteor Minor de Luxe is one of a trio of new Royal Enfield high-performance twins. It has many features in the established Royal Enfield tradition and others which are new or nearly so. Among those in the first group are the use of separate iron cylinder barrels with heavily finned light-alloy heads; a one-piece cast-iron crankshaft; a half-gallon oil compartment formed integrally with the crankcase; a four-speed Albion gear box bolted to the rear of the crankcase; and a vane-type cush drive in the rear hub. (There is also a transmission shock absorber in the clutch centre.)

The lightweight welded tubular frame, rear-chain enclosure and 17in-diameter wheels were previously confined to the Crusader models. Fresh ground is broken with "siamesed" exhaust pipes, a novel clutch having a scissor-type control mechanism, and a 7in-diameter front brake which is housed in a full-width hub.

Praise — and criticism

At a time when large-capacity machines on the whole are felt by many riders to be a shade too high and wide, the relatively low seat height (29½in) afforded by the Royal Enfield's small wheels was a real boon to riders of short or medium stature. One's feet could be placed firmly on the ground at traffic halts and kick-starting when astride the machine called for no feat of balancing. Relative positioning of the seat, footrests and handlebar gave a compact and relaxed riding posture which proved to be extremely comfortable for speeds of up to about 60 mph. For higher speeds a footrest setting 3in farther rearward would have been preferred to reduce the pull required on the handlebar to counteract wind pressure on the rider's body (though the concave shape of the seat top helped in that respect). The top edges of the seat pan could be more rounded with

advantage; they were felt to dig into the rider's thighs on long runs.

Handlebar width (24in) and grip angle are well chosen, and the lack of position adjustment for the clutch and front-brake levers — the pivot blocks are welded to the bar — was no disadvantage; the levers were found to be ideally placed. The inner ends of the levers are neatly shrouded by extensions of the pivot blocks. Brake and gear pedals, too, were well sited and could be actuated without removing the foot arches from the rests.

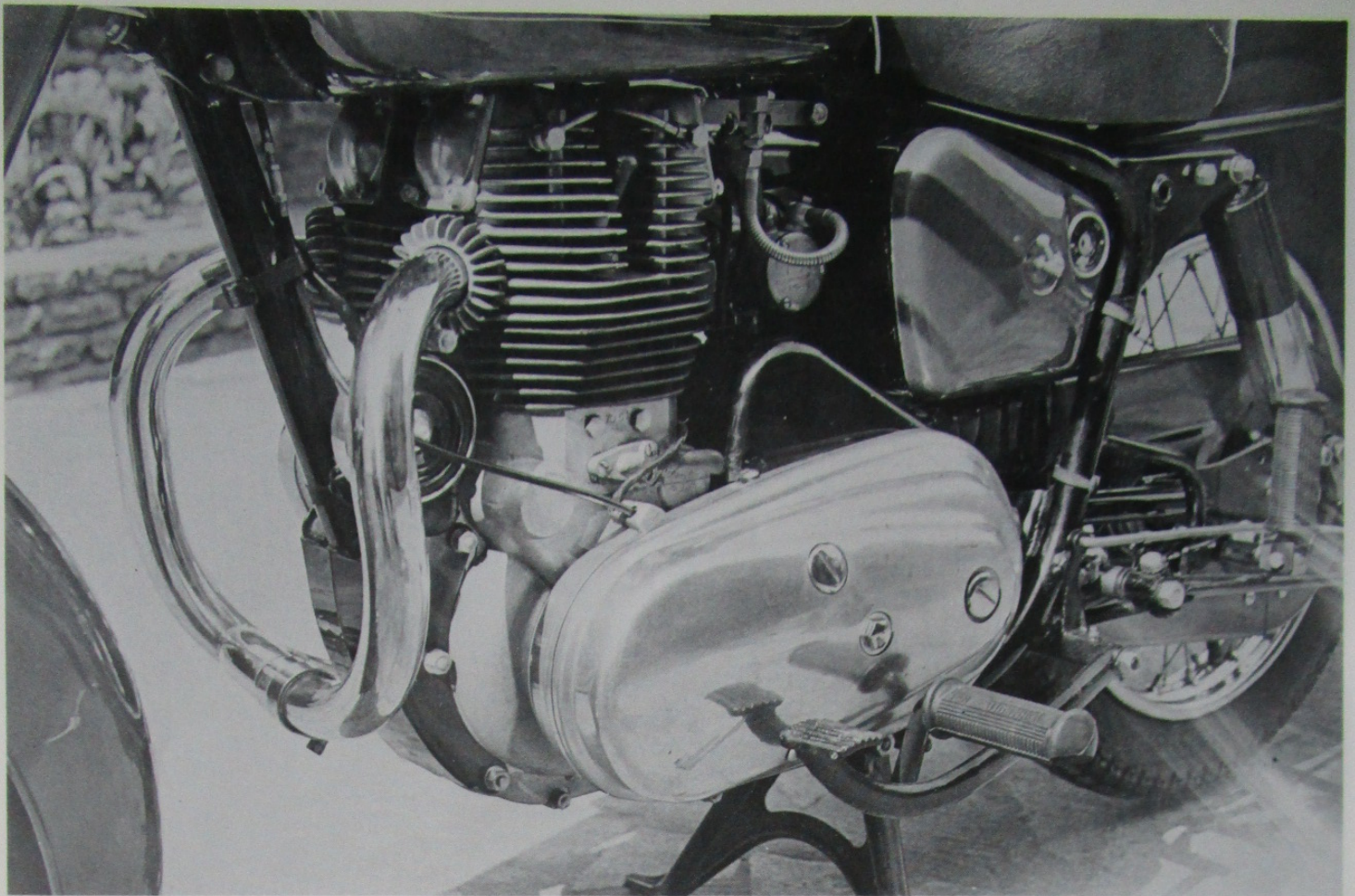
Kept its feet

Though pleasantly light, steering was very positive and quickly enhanced the feeling of confidence engendered from the start by the low seat and comfortable posture. At both ends of the speed scale it was easy to pick a precise path without conscious effort; and riding the Meteor Minor to a standstill feet-up was child's play. Stability on greasy surfaces was of a very high order. Only on fast bends with undulating surfaces was there a tendency for the model to weave — a result of the rear suspension pitching. As the 15ft turning circle proves, the steering lock is generous.

Footrest scraper

A low seat position brings difficulties for the designer. If the footrests are correspondingly low so as to ensure a comfortable knee angle (as on the Royal Enfield) then they may ground on corners as a result of the front and rear suspension compressing unless the overall width at the rests is narrow. Width across the footrests is 26½in but they are prevented from fouling too readily by the rather firm action of the front and rear springing. Footrest grounding was not bothersome unless the model was canted over unnecessarily.

Braking was first class at all speeds. The controls were



light to operate, yet not too light, and were progressive in action so that there was ample sensitivity for wet or slippery conditions. When the road surface permitted, the model could be pinned down really firmly, with both tyres squealing, from a traffic crawl or from top speed. Several hours of riding in teeming rain failed to impair brake efficiency.

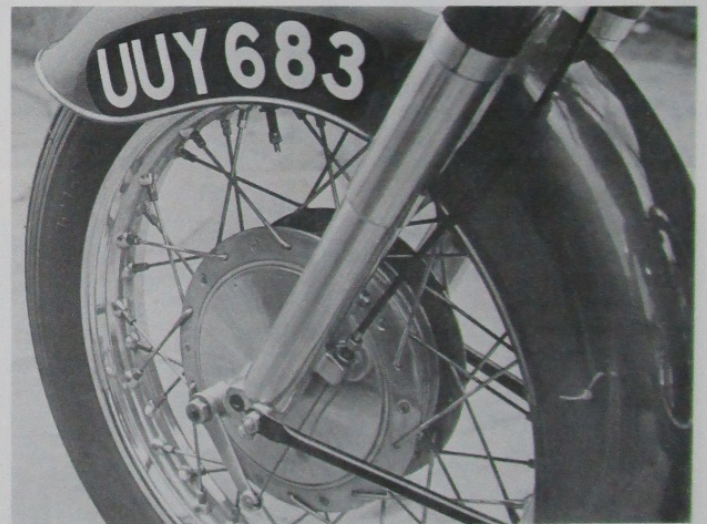
Bore and stroke of the new engine (70 x 64.5mm) are identical with those of the Crusader but there the similarity ends. In external appearance the unit is a scaled-down version of the 692 cc Constellation engine which, in turn, is based on the Super Meteor. Starting proved to be simple and reliable. The preliminary drill for a cold start was quite normal: throttle set as for fast idling, air lever closed and carburetter tickled moderately. The kick-starter is fairly low geared so little effort was required to swing the engine over compression and the unit usually came to life at the second kick. A first-time start without any preliminaries was the rule when the engine was warm. For use in the event of the battery being run down, an emergency start position is provided for the ignition switch. The engine could be started with the switch in that position provided a really vigorous thrust was given to the kick-starter.

Low-speed flat spot

Opening of the air lever after a cold start was best carried out in two or three easy stages, spread over the first mile or two. As soon as the engine had run for a few moments it would idle slowly, evenly and dependably when the twistgrip was rolled right back. At a throttle opening just above idling there was a slight flat spot which resulted in a hesitant response from the engine if the grip was twisted too rapidly. That apart, the engine pulled well over a wide speed range. Acceleration was smooth and satisfactory rather than fierce.

Smooth running and unusually supple transmission combined to make the use of top gear quite happy in areas with a 30 mph speed limit. Indeed, the effectiveness of the two rubber-block transmission shock absorbers is emphasised by the minimum non-scratch speed of 13 mph in top gear. For neatness all control cables are routed through holes in the fork-top casquette; in the case of the throttle cable that involves small-radius turns which make the control a shade sticky in operation. Delicacy of control at

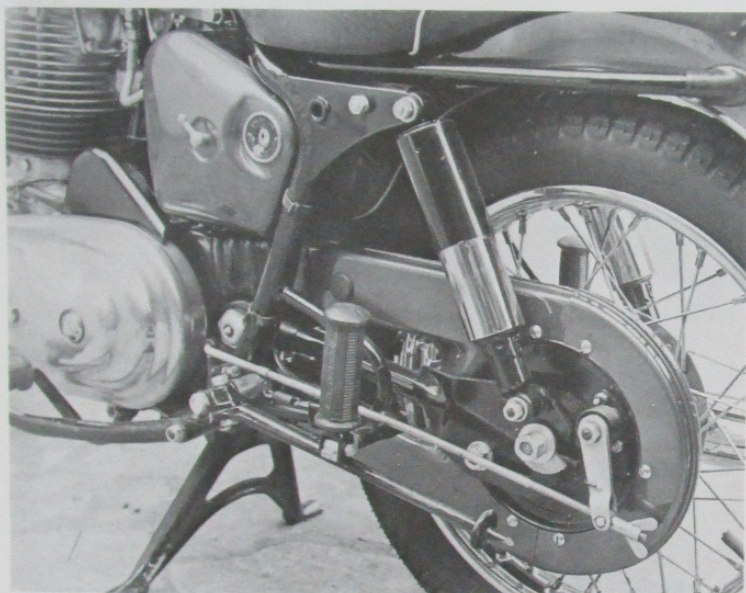
(Above) Separate castings are used for each iron cylinder barrel and also for each alloy head. The Redditch chaincase is held by a single bolt and is truly oiltight. (Below) An unused 1958 picture showing the deep mudguard valance and the 7-inch brake, unusually on the left side



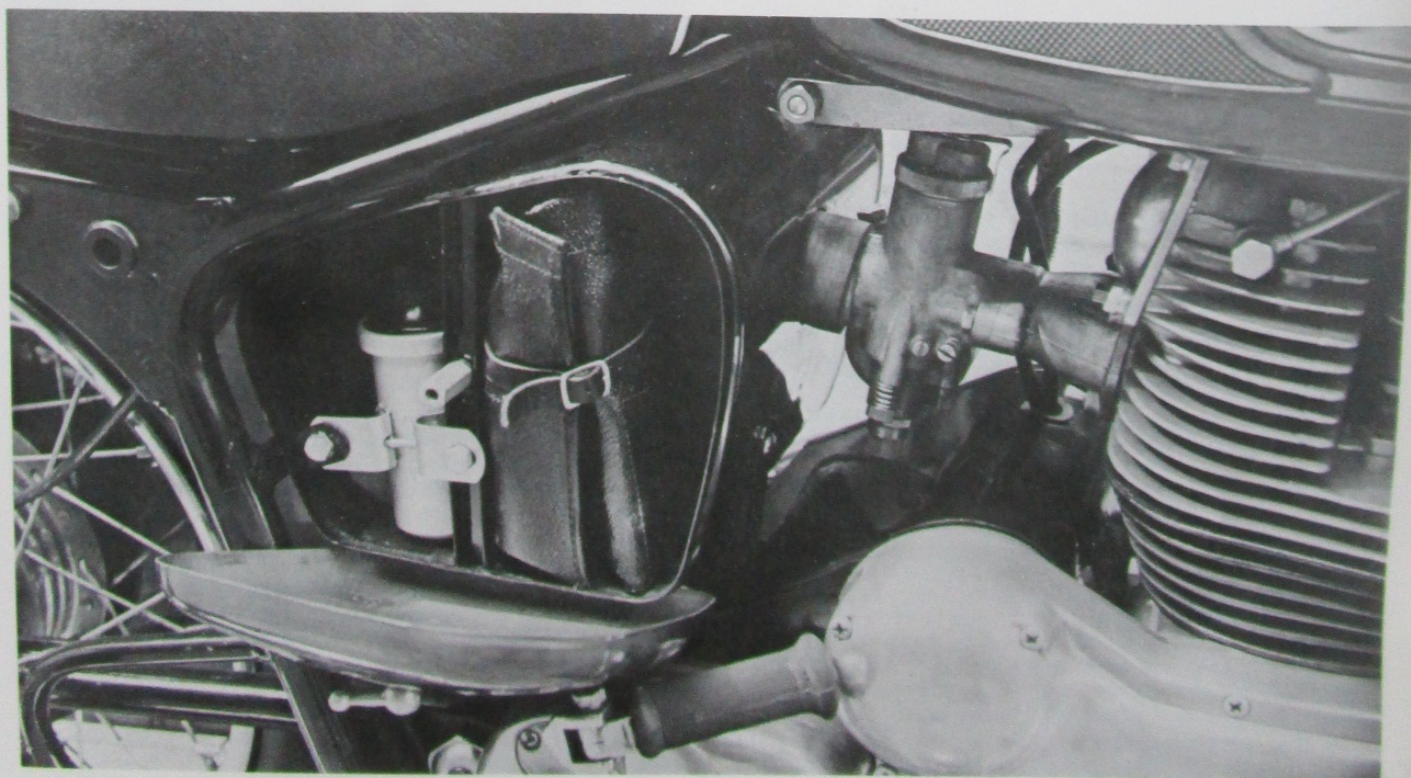
small throttle openings was enhanced by re-running the cable.

On the open road the engine cheerfully undertook any amount of hard work without tiring. Under average conditions, use of half throttle gave an indicated speed of about 75 mph. At speeds of up to 60-65 mph in top gear there was a pleasing absence of vibration, and that was the speed range most extensively used on long trips. At an indicated 70 mph engine vibration was perceptible though not objectionable; from 75 mph upward vibration could be felt through the dual-seat. When checked electrically, the speedometer read 2 mph fast at 30 mph and the error increased progressively to 5 mph at maximum speed.

Mechanical noise was average and the exhaust, though flat in tone, was unobtrusive. A peculiarity of the machine tested was oil discharge from the crankcase breather pipe during hard riding; oil fouled the distributor cover and the region of the left pinion footrest. The new clutch was light to



(Top left) Timing chest cover conceals chaindrive to the camshaft etc. Combined oil filler cap and dipstick are by the gear pedal. Sump is dry though oil is contained in crankcase compartment. (Above) The traditional Enfield casquette with its lethal, near-invisible sidelights. (Left) Rear chain enclosure, lengthy and effective propstand, light alloy centre stand and snailcam chain tensioners. (Below) Toolbox and ignition compartments, single Amal Monobloc carburetter and strip-metal cylinder head steady. (Opposite page) This editorial broadside picture is, like all those used here, a genuine roadtest photograph. None are publicity shots. Note length of rear brake pedal



operate, took up the drive smoothly and was free from drag. There was a slight tendency for the friction plates to stick, however, so that engagement of bottom gear at rest was accompanied by a slight jerk. Repeated clutch slipping, as when riding for several miles in heavy traffic or making a succession of rapid starts for the quarter-mile acceleration figures, brought about a slight increase in control backlash, which returned to normal when the clutch cooled. Momentary clutch slip was occasionally experienced when the engine was pulling hard at about 60 mph in third gear or 75 mph in top.

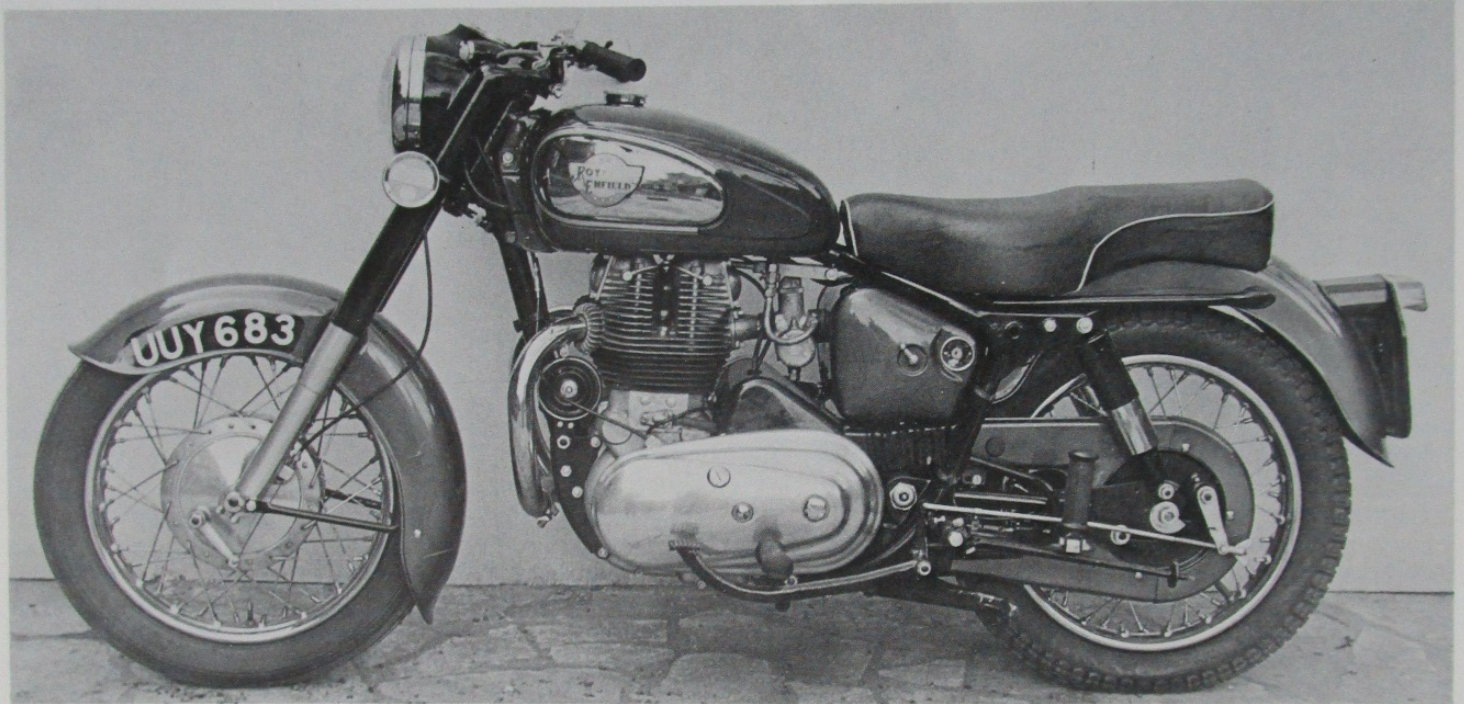
Upward gear changes could be made quickly and cleanly without special precautions, but engagement of the dogs could be felt when changing down. Neutral could be easily selected with the gear pedal; but in any event the gear box is fitted with the familiar Royal Enfield neutral finder which permits ready selection of neutral from any gear except bottom.

Both the intensity and spread of the headlamp beam were

adequate for night riding at normal speeds. Unfortunately, with the lamp unit deflected to its lowest setting, the dipped beam was parallel to the road surface. Valancing of the mudguards is unusually deep, especially at the front, and served to trap a good deal of road filth.

Operating of a wide base, the prop stand was commendably safe for parking. For maintenance purposes, the centre stand provided firm support, close to the point of balance. When the valve gear was being attended to the ready detachability of the tank (after removal of only one bolt) was greatly appreciated. Primary chain adjustment is checked through an aperture in the chaincase. Retensioning the chain by means of the adjustable slipper necessitates removal of the outer portion of the case — which is secured by a single bolt.

Finish is black for the frame and fork, with a choice of polychromatic burgundy, Wedgwood blue or black for the mudguards, rear chaincase, tool and battery boxes and petrol tank; the tank has chromium-plated side panels.



ROAD TEST BRIEF SPECIFICATION

Engine: Royal Enfield 496 cc (70 x 64.5mm) overhead-valve vertical twin with separate light alloy cylinder heads. Camshafts driven by a single chain. Light-alloy connecting rods with steel-back shell big-end bearings. Crankshaft supported in ball bearing on drive side and roller bearing on timing side. Compression ratio 8 to 1. Dry-sump lubrication with oil compartment cast integrally with crankcase; oil capacity 4 pints.

Carburettor: Amal Monobloc; air slide operated by handle-bar lever. Vokes air filter.

Ignition and Lighting: Coil ignition with auto-advance. Lucas RM14 70-watt AC generator driven by left end of crankshaft. Lucas 6-volt, 12-ampere-hour battery charged through rectifier. Lucas 7in-diameter headlamp with pre-focus light unit.

Transmission: Albion four-speed gearbox bolted to rear of crankcase; positive-stop foot control. Gear ratios: bottom, 13 to 1; second, 8.42 to 1; third, 6.08 to 1; top, 4.67 to 1. Multi-plate clutch with moulded inserts running in oil. Primary chain, $\frac{3}{8}$ in duplex in cast-aluminium oil-bath case. Rear chain, $\frac{3}{8}$ x $\frac{3}{8}$ in in pressed-steel case. Engine rpm at 30 mph in top gear, 1,990.

Fuel Capacity: 3 $\frac{3}{4}$ gallons.

Tyres: Dunlop 3.25 x 17in; front ribbed, rear Universal.

Brakes: Front, 7in diameter x 1 $\frac{1}{2}$ in wide; rear, 7in diameter x 1in wide; finger adjusters.

Suspension: Royal Enfield telescopic front fork with hydraulic damping. Pivoted-fork rear springing employing Girling hydraulically damped shock absorbers with three-position adjustment for load.

Wheelbase: 53 $\frac{1}{2}$ in unladen. Ground clearance, 6in unladen

Seat: Royal Enfield dual-seat; unladen height, 29 $\frac{1}{2}$ in.

Weight: 413 lb fully equipped, with full oil compartment and approximately one gallon of petrol.

Price: £220; with purchase tax (in Great Britain only), £274 9s.

Road Tax: £3 15s a year; £1 0s 8d a quarter.

Makers: The Enfield Cycle Co. Ltd, Redditch, Worcs.

Description: The Motor Cycle, 3 April 1958.

PERFORMANCE DATA

(Obtained at the Motor Industry Research Association's proving ground at Lindley)

Mean Maximum Speed: Bottom, 35 mph; second, 55 mph; third, 79 mph; top, 89 mph.

Highest One-way Speed: 97 mph (conditions: strong following wind; rider wearing two-piece plastic suit and overboots).

Mean Acceleration: 10-30 mph: bottom, 3 sec; second, 4.7 sec; third, 7 sec. 20-40 mph: second, 4.1 sec; third, 5.7 sec; top, 9.6 sec. 30-50 mph: second, 4.1 sec; third, 5.9 sec; top, 8.2 sec. Mean speed at end of quarter-mile from rest: 76 mph. Mean time to cover standing quarter-mile: 17.5 sec.

Petrol Consumption: At 30 mph, 85 mpg; at 40 mph, 82 mpg; at 50 mph, 75 mpg; at 60 mph, 58 mpg.

Braking: From 30 mph to rest, 32ft (surface, dry tarmac).

Turning Circle: 15ft.

Minimum Non-snatch speed: 13 mph in top gear.

Weight per cc: 0.83 lb.