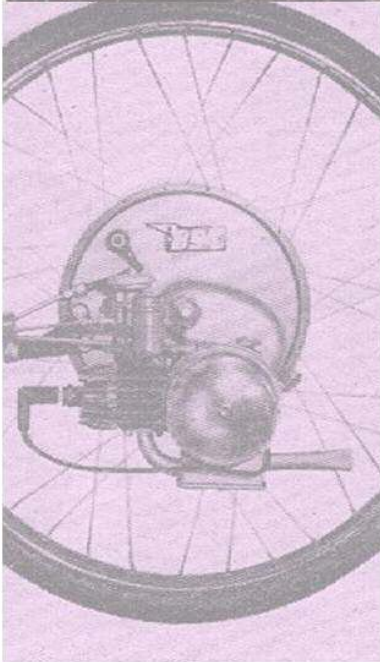


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## ROAD TESTS OF NEW MODELS

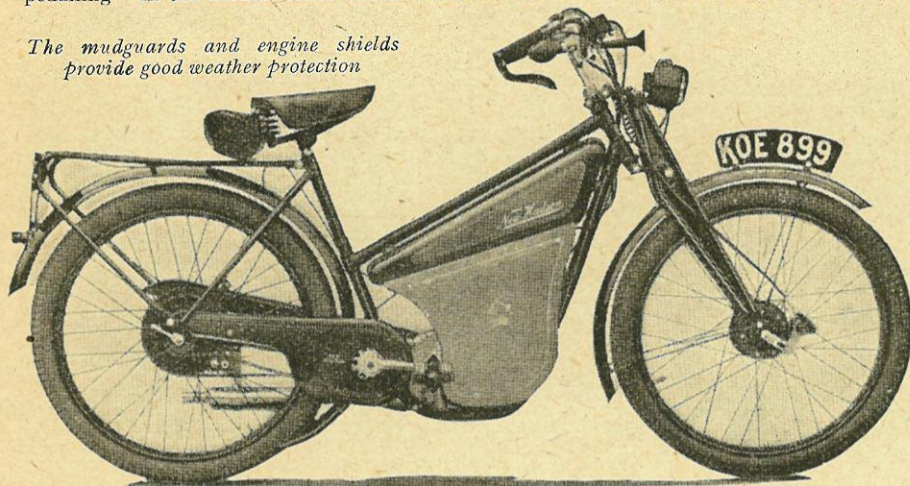
# 98 c.c. New Hudson

Business-like Runabout with Exceptional Smoothness

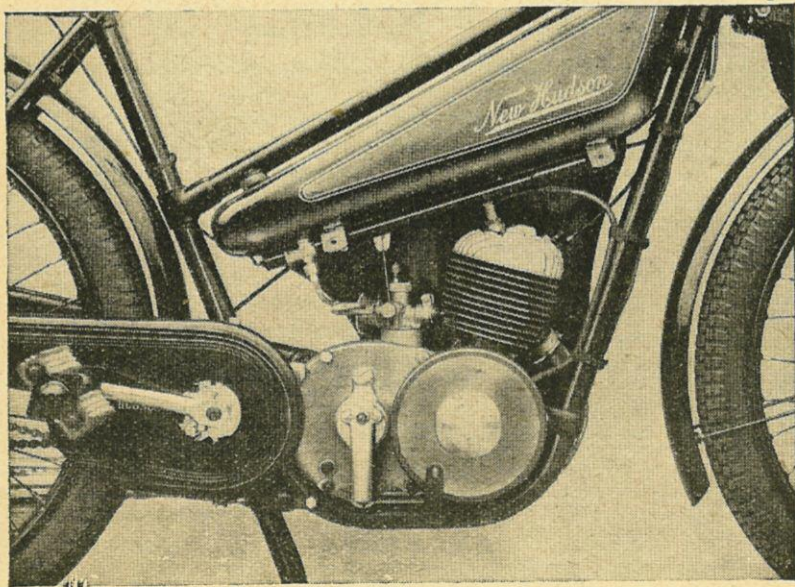
SINCE its original conception, the auticycle may be said to have grown up in many ways. In the case of the New Hudson, however, the important traits which make the auticycle appeal so strongly to cyclists have been retained in full measure. It is a machine which, to a large extent, still has the bicycle's features of lightness and easy manoeuvrability, yet which requires the use of the pedals only for starting and on unusually long and tiring gradients.

The phrase "use of the pedals" is employed advisedly, for "pedalling" in the normal sense of the word was never neces-

*The mudguards and engine shields provide good weather protection*



sary. To start off with the engine running, even when the start was being made against a certain amount of gradient, required only two light turns on the pedals. In the course of a full day's mileage in a hilly district of Worcestershire, the pedals were never once required to assist the engine on a gradient. Indeed, on climbs sufficiently severe to warrant "Steep Hill" signs and which bring an 8 h.p. car down to bottom gear, the New Hudson could be throttled back to about 8 m.p.h. From this speed it would accelerate again, without protest and without pedal assistance.



The overall gear ratio of the New Hudson is 10.75 to 1. It is a ratio which is excellently suited to the engine's characteristics. Hence, the machine is endowed with acceleration which is sufficiently lively for modern traffic conditions, which makes hill-climbing exceptionally good, and which, when the machine is humming along the open road, allows 30 m.p.h. cruising speeds to be maintained without the rider having the impression that the engine is working hard.

Throughout the entire throttle range the carburation was clean-cut and the response immediate to any movement of the handlebar-mounted throttle lever. Speeds of 25-30 or even 33 m.p.h. could be quickly attained once the machine was under way. Indeed, under favourable conditions, 35 m.p.h. could be reached and held apparently indefinitely. The little engine never once gave sign of overheating during the course of the test, no matter how brutally, for purposes of experiment, it was treated.

At the lower end of the r.p.m. scale, the engine pulled smoothly and sweetly, and it two-stroked well when under only light load. There was no trace of transmission snatch at 8 m.p.h. assuming, of course, that the throttle was handled with reasonable discretion. Engine balance was unimpaired throughout the entire throttle range, and there was no noticeable vibration. The clutch was smooth and sweet in its take-up of the drive and freed perfectly. Idling was slow and 100 per cent reliable.

The throttle setting, as is usual with two-strokes, was such that the engine stopped when the throttle lever was in its closed position. With the lever drawn just a shade to the rear, the machine could be brought to a stop, as at traffic lights, for instance, with the certain knowledge that the engine would not stall.

All the controls on the New Hudson, with the exception of that for the carburettor strangler, are mounted on the handlebars. Clutch and front brake levers are on the left, and throttle, rear brake, and compression-release on the right. The clutch lever is fitted with a ratchet (or sprag) to hold the clutch out of engagement when desired. The only time the compression release was used in the test was when the engine was started by the rider walking alongside the machine.

When the engine was to be started from cold, the strangler rod, which is mounted alongside the tank, was raised and the throttle opened partly; no flooding was necessary, and the throttle could be set in any position on the first half of its movement. If the machine was then pedalled up to a speed roughly equal to that of a fast walking pace and the clutch engaged, the engine responded instantly. Considerable effort was required to pedal the machine off because of the high ratio of the pedalling gear. The alternative, easier method with an auticycle is that touched upon in the previous paragraph, i.e., to push-start, dropping the compression release and then grasping the clutch lever.

The engine reached an efficient working temperature in about a quarter of a mile. Immediately the engine fired, the strangler lever

*Engine shields may be easily removed to allow access to the engine*



# Autocycle

## of Engine and Transmission

required to be fractionally depressed—it was easily moved by the rider in a normally seated position—and after about a quarter of a mile it could be fully depressed and left there until the next cold start was necessary. With a warm engine, starting was simply a matter of pedalling off as one would on a normal bicycle and then engaging the clutch. Assuming anything below half-throttle again, the engine fired immediately.

The standard of mechanical quietness was very good. Even after a cold start there was only a pleasant mechanical whirr from behind the engine shields. The exhaust was at no time obtrusive to the rider, but when the machine was being driven on full throttle, or the engine was running light and firing irregularly, it was felt to be rather too noisy for pedestrians' peace of mind.

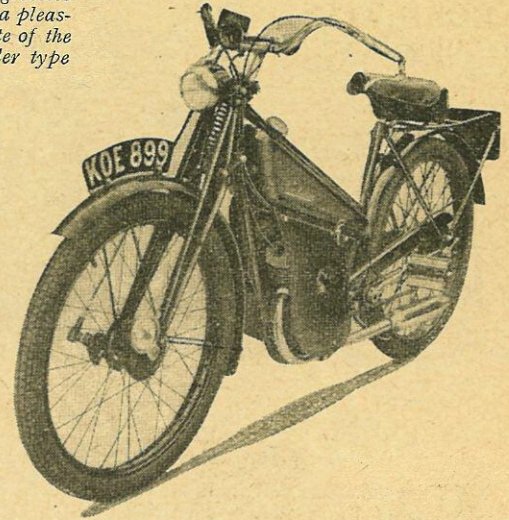
### Fuel Economy

On wet or dry roads and, indeed, on ice, the New Hudson handled with the facility of a pedal-cycle. The light weight and the excellent riding position and fork action made the machine easily manoeuvrable and controllable; on corners and bends the autocycle heeled over easily, without physical effort and without any trace of snaking or chopping. The fork is of the parallel-ruler type, employing a link-action and a single compression spring. It took care of road shocks most satisfactorily—with a soft, progressive action.

All the controls were light in operation. The clutch and front brake levers, however, were rather too close for simultaneous operation by a heavily gloved hand. Both brakes are of the internal-expanding type. They did not come up to the standard of motor cycle brakes, but were found to be adequate for normal riding.

Fuel economy proved an excellent feature of the New Hudson, the consumption working out at 144 m.p.g. with a heavily garbed rider at speeds of between 30 and 35 m.p.h., and no less than 208 m.p.g. at 20-25. Throughout the test the tank top

*A soft, progressive action was a pleasing attribute of the parallel-ruler type fork*



remained clean and, so far as the cleanliness of the rider was concerned, no special "dressing-up" was required. In other words, good protection from road dirt and water was provided by the mudguards and engine shields.

A sturdy central stand is fitted. It was delightfully easy to use and it was never necessary to park the New Hudson bicycle fashion, by resting a pedal on the kerb. The carrier on the rear mudguard was very useful and was in constant use throughout the test. The driving light from the 4in head lamp was adequate for speeds up to 25 m.p.h. in the dark. A battery in the lamp provided current for the parking bulbs. The engine shields could be quickly and easily removed should access to the engine be desired.

Finish is black with gold-lined red tank panels, and there are gold transfers on the engine shields. The general standards of manufacture evidenced by the machine are very high.

## Information Panel

### 98 c.c. New Hudson Autocycle

#### SPECIFICATION

**ENGINE:** Villiers 98 c.c. (47 x 57 mm) single-cylinder two-stroke in unit with primary drive and countershaft clutch. Roller bearing big-end; ball bearings supporting mainshafts. Detachable aluminium-alloy cylinder head. Petroil lubrication.

**CARBURETTOR:** Villiers single-lever, with handlebar-lever throttle control. Air-filter, incorporating strangler, standard.

**TRANSMISSION:** Chain. Primary,  $\frac{3}{8}$ in x 0.225in. in oil-bath case. Secondary,  $\frac{1}{2}$ in x  $\frac{1}{8}$ in. Pedalling chain,  $\frac{1}{2}$ in x  $\frac{1}{8}$ in. Both with guard over top run. Overall gear ratio, 10.75 to 1.

**IGNITION AND LIGHTING:** Villiers flywheel magneto with dual lighting coils; 4in head lamp with dry battery for parking.

**PETROIL CAPACITY:** 1 $\frac{3}{8}$  gallons.

**TYRES:** Dunlop 2.25 x 21in front and rear.

**BRAKES:** 4in diameter internal-expanding front and rear.

**FRONT FORK:** Webb girder-type with single compression spring.

**WHEELBASE:** 50 in. Ground clearance, 3 $\frac{1}{2}$ in.

**SADDLE:** Terry; height (in lowest position), 32 $\frac{1}{2}$ in.

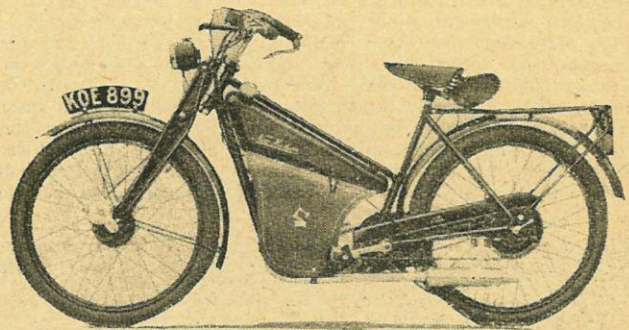
**WEIGHT:** 123 lb, with empty tank and fully equipped.

**PRICE:** £45, plus Purchase Tax (in Britain only), £12 3s.

**ROAD TAX:** 17s. 6d. a year. 4s 10d a quarter. Half duty if only standard ration used.

**MAKERS:** New Hudson, Ltd., Birmingham, 11.

**DESCRIPTION:** *The Motor Cycle*, 29 September, 1949.



#### PERFORMANCE DATA

**MAXIMUM SPEED:** 35 m.p.h.

**CRUISING SPEED:** 8 to between 30 and 35 m.p.h.

**ACCELERATION**

0-20 m.p.h.	0-25 m.p.h.	0-30 m.p.h.	10-25 m.p.h.
7 sec.	9.2 sec.	13.4 sec.	7.2 sec.

**PETROIL CONSUMPTION:** At 20-25 m.p.h. 208 m.p.g. At 30-35 m.p.h., 144 m.p.g.

**BRAKING:** From 30 m.p.h. to rest, 37 feet 6 inches.

**TURNING CIRCLE:** 9 feet 6 inches.

**MINIMUM NON-SNATCH SPEED:** 8 m.p.h.

**WEIGHT PER C.C.:** 1.26 lb.