



Six-cylinder silence and Volvo engineering

OF recent years the four-cylinder Volvo models have sold well because of their superb engineering, coupled with their reputation for long-lasting reliability. It seems a long time since Jo Bonnier first brought a Volvo to Silverstone, and after an energetic period of racing and rallies the car settled down with a reputation for being tougher than most. There are quieter and smoother four-cylinder cars, but none are better made.

The new six-cylinder Volvo is built to similar engineering standards. Indeed it uses many components of the 2-litre four-cylinder engine, including pistons and valves. The designers have taken no short cuts and there is plenty of water space

between all the cylinder bores, with a massive seven-bearing crankshaft. The block and head are both of cast iron, so the long engine is fairly heavy.

The wheelbase of the car has been increased from about 8ft 6 ins to 8ft 10 ins, but even so there is a considerably greater percentage of the weight on the front wheels, compared with the four-cylinder models. The straight-six is a delightful engine type in every way, but it does pose installation problems, and the manufacturers have avoided lengthening the front end too much for fear of loss of structural rigidity. The Volvo 164 has all the safety features that one expects with this make, and an elaborate system

of exhaust emission control is standard.

From the start it is obvious that this is a really splendid engine. Outstandingly smooth and silent, it has all the capacity for very high revs of its smaller brothers. It is in unit with an excellent four-speed gearbox, which is worthy of it, with light and precise changes and silent running. A divided propeller shaft prevents transmission vibration.

The test car had been fitted with a higher-g geared rear axle than is normal for overdrive models, having the 3.31 ratio of the automatic cars instead of the normal 3.73 to 1. This was a pity as it fractionally reduced the performance, especially in overdrive. However, a spectacularly fast



ROAD TEST
by John Bolster

Volvo 164



The big new Volvo 164 is in the chauffeur-driven class, but with the kind of performance to attract the master to the wheel.

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0-60 mph time was recorded because this speed was brought just within the compass of second gear.

With this high gearing, the 164 was capable of 107 mph in direct top, but it would barely reach 100 mph in overdrive—less with adverse wind or gradient. However, it made third a splendid gear, which I used for miles on winding roads.

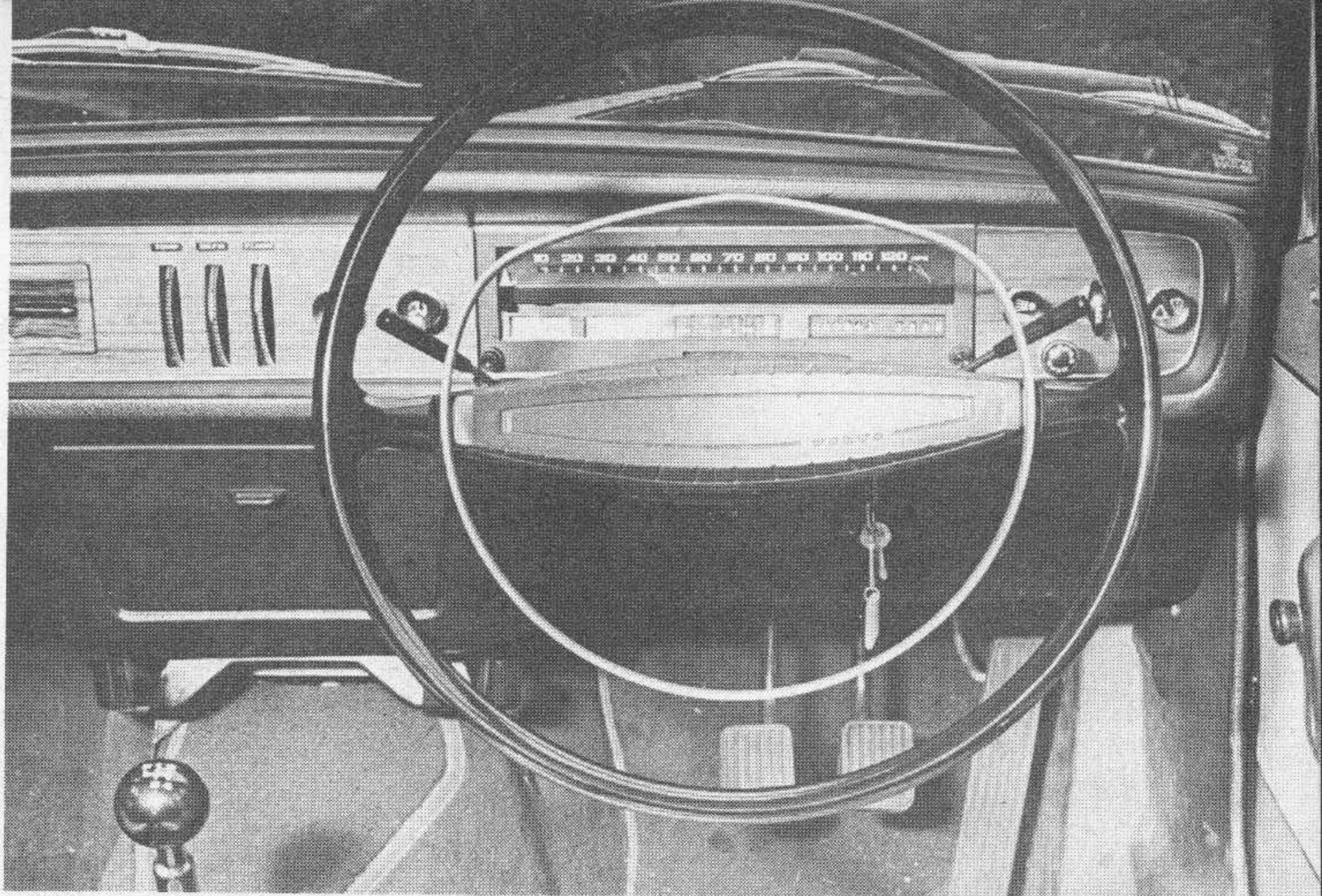
The chassis design follows Volvo traditions, with wishbones in front and a well-located rear axle on helical springs. The car tends to understeer, as would be expected from its weight distribution, but it swings through curves effortlessly at high speed and is outstandingly stable in gusty winds. It is a fast and untiring performer on motorways, but on winding and bumpy roads it seems to have rather a lot of suspension movement, appearing to roll a good deal and hop about somewhat when observed from outside, though it always feels controllable to the driver. Perhaps it is a more dignified and less sporting car than the four-cylinder Volvos, and it is consequently not such fun to drive hard.

The power-assisted steering is light even at parking speeds and gives the driver some feel on dry roads, but in the wet it is rather dead and the increased understeer must be watched. The turning circle of this large car is quite a bit smaller than that of the Mini, which is greatly appreciated during parking manoeuvres. The brakes have an elaborate duplicated operation system which renders failure impossible. They have good resistance to fading, but on the test car the front wheels sometimes tended to lock. The hand brake is very powerful, but it allows the car to run a few inches before stopping it, presumably due to a self-servo action of the shoes.

The 164 is quiet mechanically, and the excellent fit of the windows keeps wind noise to a minimum, so the bump-thump from the tyres is rather noticeable on bad roads. The seats are very comfortable, with the special Volvo control for varying the brake support, and the upholstery is beautifully done. The instrument panel is attractive, though I would prefer a round speedometer dial, and the battery of warning lamps covers most situations.

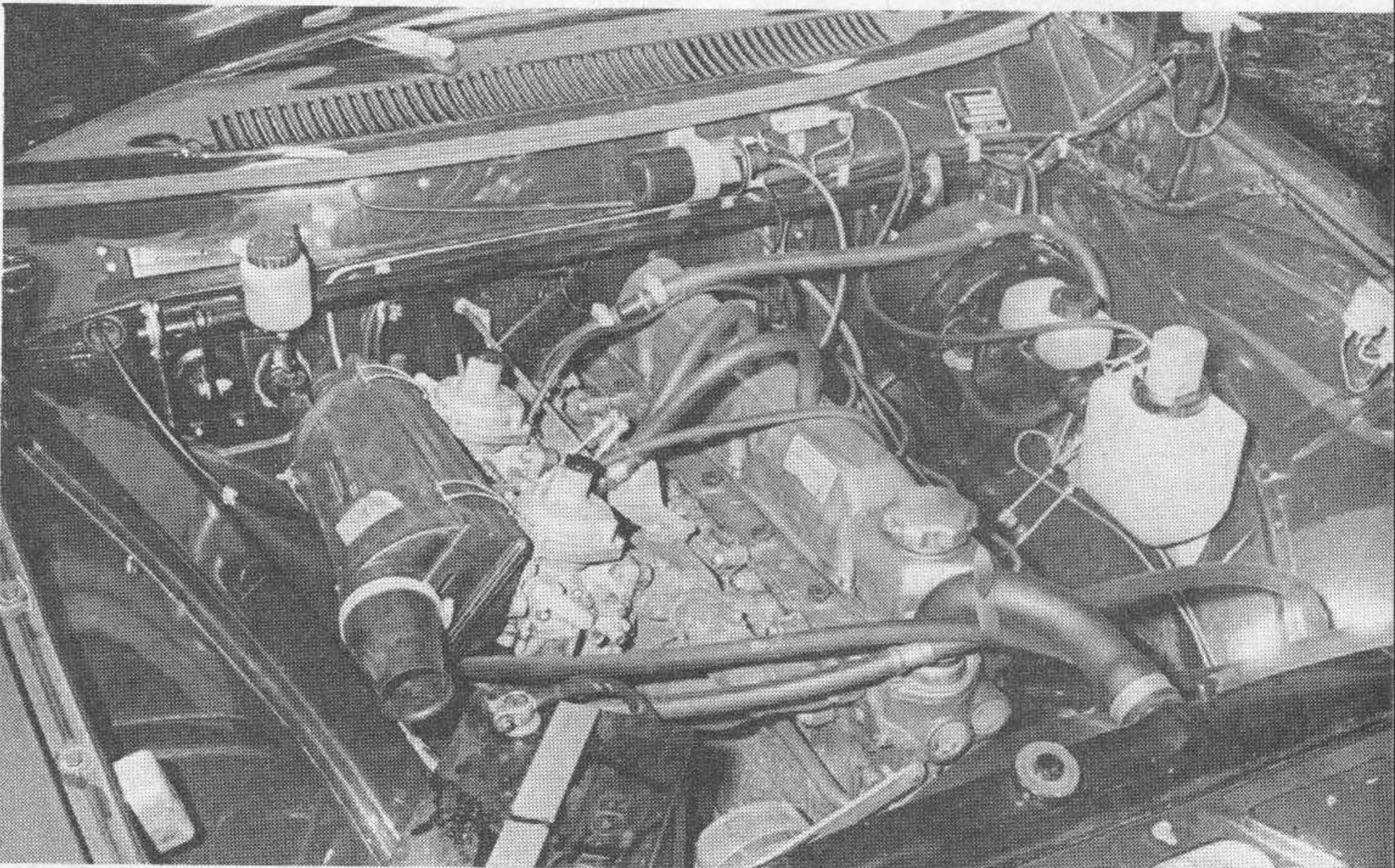
The heater is very efficient and begins working almost as soon as the car moves off, but it is rather astonishing that a new car can be introduced without any provision for adjustable face-level ventilation. The rear window has built-in heating wires with two settings, the stronger of which will deal with thick ice, and an illuminated switch knob reminds the driver not to leave it on unnecessarily. The luggage boot has a vast capacity, though it has a high sill over which suitcases must be lifted.

Many practical features will endear the car to its owner. Perhaps he will be a rather older man than the typical Volvo purchaser has been hitherto, and this big, dignified car is perfectly suited to chauffeur-driven occasions. Six-cylinder cars of about 3-litres capacity form a very popular class these days, and the all-round performance expected is pretty high. The 164 is a bit above the average in this respect, but it is also somewhat costly, which admirers of the *marque* will consider to be justified by the very high standard of construction. Above all, it will attract new clients to the Volvo fold who consider the previous models too unrefined. Far from being a sports car, this big machine will nevertheless put up an excellent average on long journeys, and it will not tire its occupants in doing it. This is a new kind of Volvo, but a logical development.



The interior lacks some of the assumed comforts of the present-day car, but nevertheless provides for a comfortable journey over long distances.

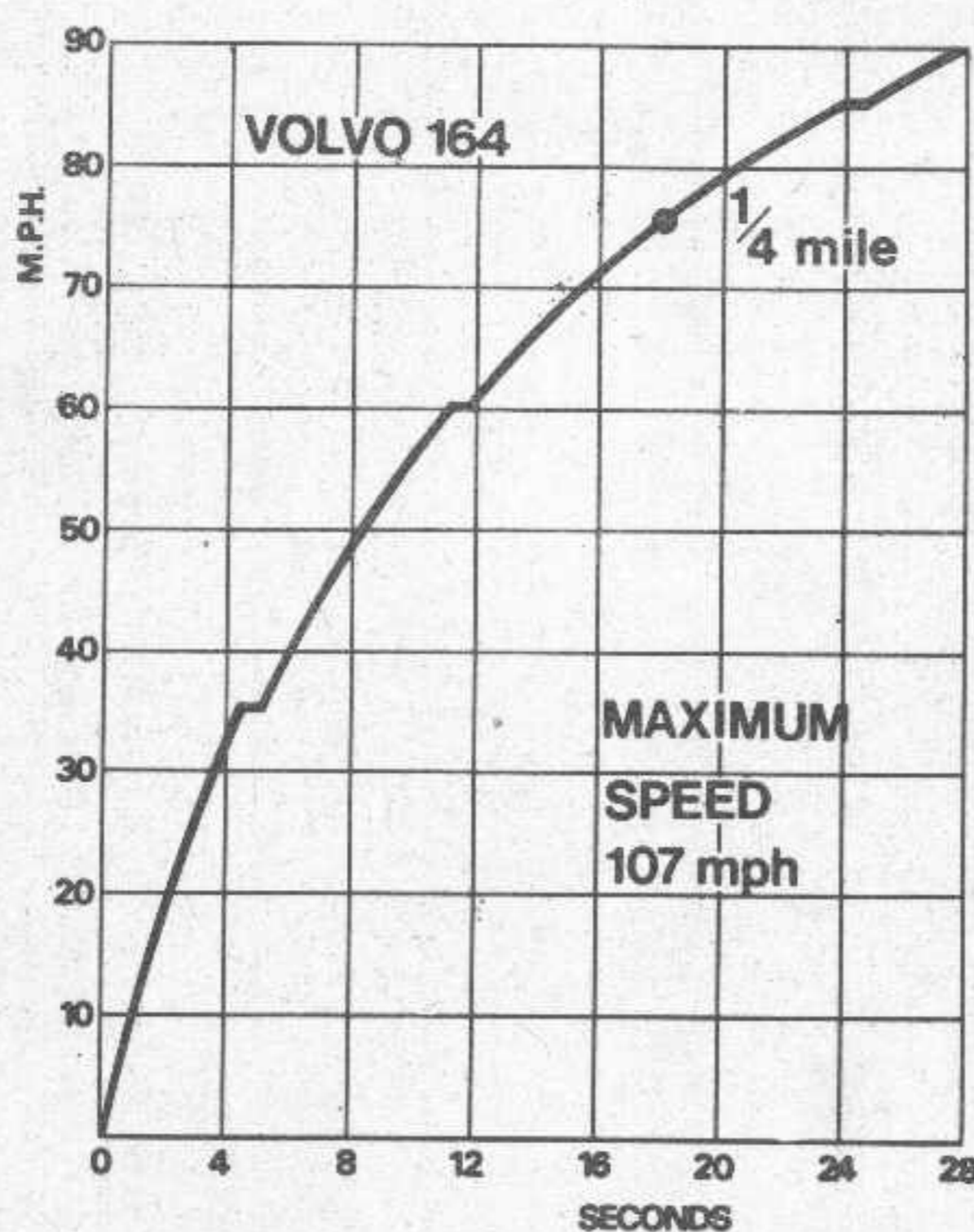
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The new cast-iron, six-cylinder 3-litre engine is a direct development of the four-cylinder unit.

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Specification and performance data



Car Tested: Volvo 164 four-door saloon, price with overdrive and power steering £2,045 including tax.

Engine: Six cylinders in line, 88.9 mm x 80 mm, 2979 cc. Pushrod-operated overhead valves. Compression ratio 9.2 to 1. 145 bhp at 5500 rpm (gross), 130 bhp at 5000 rpm (net). Twin Zenith-Stromberg carburettors with special exhaust emission control system.

Transmission: Single dry plate diaphragm-spring clutch, 4-speed all-synchromesh gearbox with short central lever, ratios 1.00, 1.34, 1.97, and 3.14 to 1. Divided open propeller shaft. Hypoid rear axle, ratio on test car 3.31 to 1 (see text). Overdrive 0.797 to 1.

Chassis: Combined steel body and chassis. Independent front suspension by wishbones and helical springs with anti-roll bar. Worm and roller steering with power assistance. Rigid rear axle on twin trailing arms and Panhard rod with helical springs. Telescopic dampers all round. Girling disc brakes round with servo assistance and dual operating circuit. Small supplementary rear drums for hand brake. Bolt-on disc wheels, fitted 165 SR x 15 radial ply tyres.

Equipment: 12-volt lighting and starting with alternator. Speedometer. Water temperature and fuel gauges. Heating, demisting and ventilation system. Two-speed windscreen wipers and washers. Flashing direction indicators. Reversing lights.

Dimensions: Wheelbase 8ft 10 1/4 ins. Track 5ft 5 1/4 ins. Overall length 15ft 5 1/4 ins. Width 5ft 8 1/4 ins. Weight 1 ton 5 cwt 2qrs.

Performance: Maximum speed (direct top) 107 mph. Speeds in gears: overdrive 100 mph, third 85 mph, second 60 mph, first 35 mph. Standing quarter-mile, 18.6 s. Acceleration: 0-30 mph, 3.7 s. 0-50 mph, 8.2 s. 0-60 mph, 10.4 s. 0-80 mph, 20 s. Fuel consumption: 21 to 24 mpg.