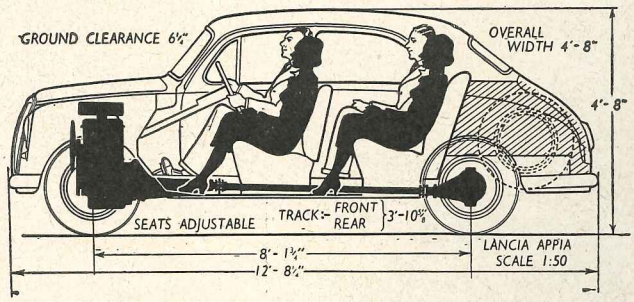
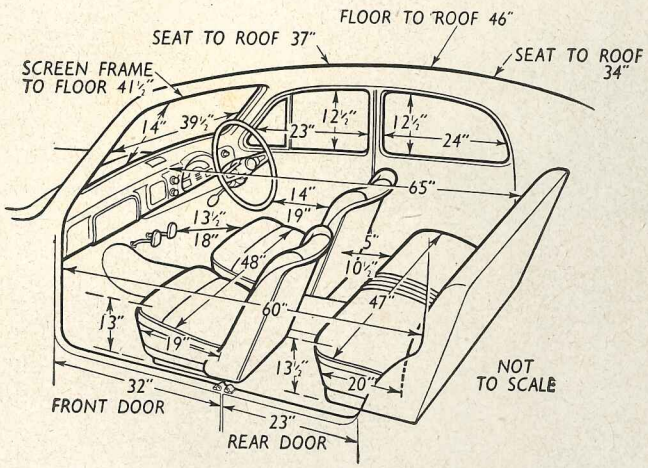
# The Motor Road Test No. 4/54 (Continental)

**Make:** Lancia **Type:** Appia

**Makers:** Lancia & C., Via Monginevro, Turin, Italy.

*(British concessionaires: Lancia (England) Ltd., Alperton, Wembley, Middlesex.)*




## Test Data

**CONDITIONS:** *Mild, damp weather with little wind. Tarred road surface. Italian standard-grade (72 octane) pump fuel. Performance tests started with 80 miles run by car since new.*

### INSTRUMENTS

| | |
|---|---|
| Speedometer at 30 m.p.h. | 10% fast |
| Speedometer at 60 m.p.h. | 5% fast |
| Distance recorder | 5% fast |

### MAXIMUM SPEEDS

**Flying Kilometre**

| | |
|---|---|
| Mean of four opposite runs | 76.1 m.p.h. |
| Best time equals | 76.6 m.p.h. |

**Speed in Gears** Recommended limits

| | |
|---|---|
| Max. speed in 3rd gear | 50 m.p.h. |
| Max. speed in 2nd gear | 33 m.p.h. |
| Max. speed in 1st gear | 18 m.p.h. |

### FUEL CONSUMPTION

| | |
|---|---|
| 41.0 m.p.g. at constant 30 m.p.h. | |
| 39.0 m.p.g. at constant 40 m.p.h. | |
| 36.5 m.p.g. at constant 50 m.p.h. | |
| 32.5 m.p.g. at constant 60 m.p.h. | |
| 29.0 m.p.g. at constant 70 m.p.h. | |

Overall consumption for 151 miles, driving hard, 5.2 gallons, = 29.0 m.p.g.

Fuel tank capacity, 8⅓ gallons, with warning light at 1 gallon.

### ACCELERATION TIMES Through Gears

| | |
|---|---|
| 0-30 m.p.h. | 8.1 sec. |
| 0-40 m.p.h. | 14.1 sec. |
| 0-50 m.p.h. | 19.6 sec. |
| 0-60 m.p.h. | 32.5 sec. |
| 0-70 m.p.h. | 56.7 sec. |
| Standing Quarter Mile | 25.2 sec. |

### ACCELERATION TIMES on Two Upper Ratios

| | Top | 3rd |
|---|---|---|
| 10-30 m.p.h. | 15.9 sec. | 10.1 sec. |
| 20-40 m.p.h. | 15.4 sec. | 9.7 sec. |
| 30-50 m.p.h. | 15.8 sec. | 10.9 sec. |
| 40-60 m.p.h. | 21.2 sec. | — |
| 50-70 m.p.h. | 37.7 sec. | — |

### WEIGHT

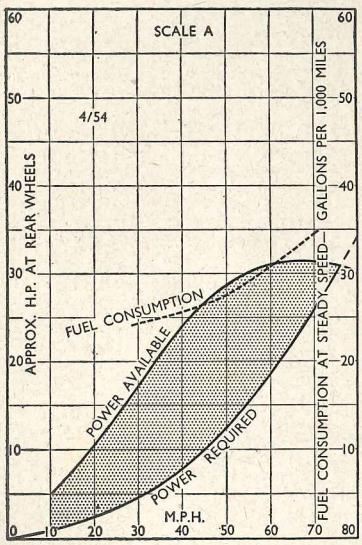
| | |
|---|---|
| Unladen kerb weight | 17 cwt. |
| Front/rear weight distribution | 50/50 |
| Weight laden as tested | 21 cwt. |

### HILL CLIMBING (At steady speeds)

| | |
|---|---|
| Max. top gear speed on 1 in 20 | 55 m.p.h. |
| Max. top gear speed on 1 in 15 | 32 m.p.h. |
| Max. gradient on top gear | 1 in 14.4 (Tapley 155 lb./ton) |
| Max. gradient on 3rd gear | 1 in 9.3 (Tapley 240 lb./ton) |
| Max. gradient on 2nd gear | 1 in 6.0 (Tapley 370 lb./ton) |

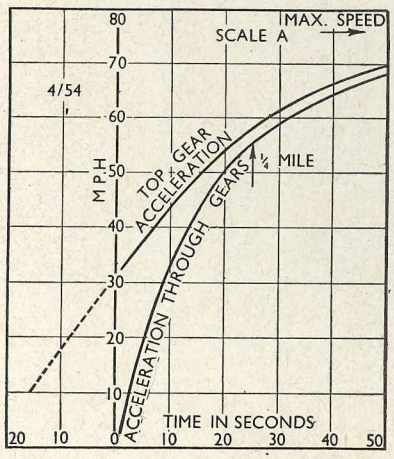
### BRAKES at 30 m.p.h.

0.84 g retardation (= 35¾ ft. stopping distance) with 70 lb. pedal pressure
0.70 g retardation (= 43 ft. stopping distance) with 50 lb. pedal pressure
0.35 g retardation = 86 ft. stopping distance) with 25 lb. pedal pressure




**Drag at 10 m.p.h.** 36 lb.
**Drag at 60 m.p.h.** 117 lb.

**Specific fuel consumption** when cruising at 80% of maximum speed (i.e., 60.9 m.p.h.) on level road, based on power delivered to rear wheels 0.78 pints/b.h.p./hr.




## Maintenance

**Sump:** 6 pints, S.A.E. 20 (below 32° F.); S.A.E. 30 (32° F.-68° F.); S.A.E. 40 (above 68° F.) **Gearbox:** 2½ pints, S.A.E. 90. **Rear axle:** 2⅔ pints, S.A.E. 90. **Steering gear:** ½ pint, S.A.E. 140 oil. **Radiator:** 9½ pints (1 drain tap with extension for access from above). **Chassis lubrication:** By grease gun every 5,000 miles to 1 point and check front suspension and steering gear oil levels every 2,000 miles. **Ignition timing:** 8° B.T.D.C. (static). **Spark plug gap:** 0.024-0.028 in. **Contact breaker gap:** 0.012-0.016 in. **Valve timing:** (with 0.032 in. tappet clearance) Inlet opens 2° B.T.D.C., closes 40° A.B.D.C.; Exhaust opens 37° B.B.D.C., closes 2° A.T.D.C. **Tappet clearances:** (Cold) Inlet 0.004 in., exhaust 0.006 in. **Front wheel toe-in:** 0-0.078 in. **Camber angle:** 1°. **Castor angle:** 0°. **Tyre pressures:** 18 lb. **Brake fluid:** Vegetable type. **Battery:** 12-volt, 35 amp. hr. **Lamp bulbs:** 12 volt. **Headlamps:** 45/40 watts. **Side and indicator lamps:** 3/20 watts. **Rear indicator and stop lamps:** 3/20 watts. **Number plate lamp:** 5 watts. **Interior lamp:** 5 watts. **Warning lamps** (ignition, petrol reserve) and **instrument lamp:** 2.5 watts. **Direction indicator warning light:** 1½ watts.

# The LANCIA Appia

## A Small Saloon of Individual Character and the Highest Quality

Roadholding and brakes owe much to the mountain breeding of the Appia, seen on the ascent to the old monastery of San Michele, near Turin.

### In Brief

| | |
|---|---|
| Price, in Italy: 1,328,600 lire, equals £780. | |
| Capacity ... ... ... | 1,090 c.c. |
| Unladen kerb weight ... | 17 cwt. |
| Fuel consumption ... | 29.0 m.p.g. |
| Maximum speed ... ... | 76.1 m.p.h. |
| Maximum speed on 1 in 20 gradient ... ... | 55 m.p.h. |
| Maximum top gear gradient | 1 in 14.4 |
| Acceleration | |
| 10-30 m.p.h. in top ... | 15.9 sec. |
| 0-50 m.p.h. through gears | 19.6 sec. |
| Gearing: 15.3 m.p.h. in top at 1,000 r.p.m.; 77.8 m.p.h. at 2,500 ft. per min. piston speed. | |

WHEN a motor manufacturer hands over to the tender mercies of *The Motor* road testers a car costing some £780 which has covered barely 80 miles in its life, it is evident that the customer is intended to receive some solidly built machinery for his money. Despite the obvious stiffness of the engine, circumstances made it convenient to carry out some maximum speed runs almost immediately, in which endeavour we were heartened by instructions in the owner's handbook suggesting only that during the running-in period the speed should be restricted to 62 m.p.h., and this from an engine of barely 1100 c.c. capacity.

A further series of runs at the end of two days' testing disclosed that the maximum speed had risen by over 1 m.p.h. to the 76.1 m.p.h. shown on the opposite page, yet the only noticeable difference in the car, apart from the freer running of the engine, was a justifiable increase in tappet noise.

Successor to the Ardea, few of which were seen in Great Britain, the Lancia Appia was introduced in the spring of last year as the smallest in the Lancia range, strictly a four-seater with a four-cylinder, 1,090 c.c. engine. It inherited the unique position of Lancias for some years past, as the second largest producers of cars in a country where, in terms of quantity, there are virtually only two manufacturers. With 85% of Italy's cars coming from one factory, it is clear that any competitors must be considerably more expensive, and equally that they will be in brisk demand, not only for their individual qualities, but simply as something different from the great majority.

The Appia is different, particularly in the manner in which it handles on the road, and it has qualities of construction which place it in an entirely different class from any other car of comparable size. Lancia features which reappear in the Appia after thirty years' constant use include the narrow-angle V engine, sliding pillar independent front suspension and integral body construction, all of which combine to make a car of modern performance with a solid yet delicate "feel" in the best vintage tradition.

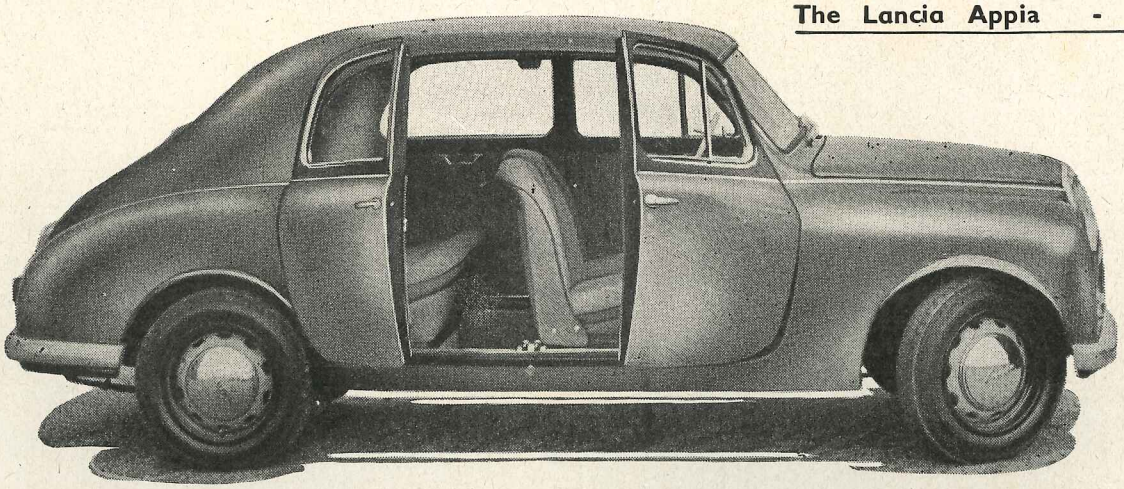
### Fast Cruising

Diminutive in appearance, the engine is completely smooth and silent over a range of speeds from tick-over to the peak of 4,800 r.p.m., when the output, in standard form, is an easy 38 b.h.p. The fast-revving engine is allied to a transmission of unusually high ratio, so that in contrast to most small family saloons where "top-end" performance is sacrificed for better top-gear acceleration at low speed, the power curve reaches its peak at almost exactly the mean recorded maximum speed. Out of deference to new components, the recommended speeds of about 50 m.p.h. and 33 m.p.h. in third and second gears were not exceeded, although the car was obviously capable of doing so. Long straight roads, and especially autostrada, mean that a large number of Italian cars are continually driven almost flat out for hours on end, and the Appia is well suited for such treatment. The sump is heavily ribbed for oil cooling in hot weather.

Acceleration, however, is by no means sluggish, for the compactness for which the short engine is largely responsible brings with it light weight and a very trim, air-smoothed shape. Not all the Italian landscape is flat, and our testing included a proportion of driving in the foothills of the Alps around Turin, where the gearbox was used, as it was meant to be used, to the fullest extent. For this type of country the ratios are very well chosen indeed; a high third which can be used continuously for long periods without fuss or noise, and a second that enables a reasonable speed to be maintained on a road

The small Lancia shares with its stablemate the Aurelia an exceptionally "clean" shape, free from any unnecessary protuberance or wind-catching hollow.

## The Lancia Appia - - - -



Complete absence of a central door pillar leaves space for entering front or rear seats which would shame many larger cars. The extra leg room made possible by the short V-4 engine is clearly shown in this picture.

fraught with hairpins. In parts of the world where snow is common during the winter the very steep gradient calling for an ultra-low bottom gear is more of a rarity than in English hills, and an emergency ratio of 25.45/1 is kept for reverse gear only. The comment of one member of the staff on the car as a whole, that it appears to be "the work of engineers rather than production experts" is particularly true of the steering column gear change, the visible components of which are limited to a short, stiff lever projecting from a shapely housing and apparently connected to the gearbox by the minimum number of short, stiff links. The change is both positive and quick and the only complaint concerns a rather weak buffer spring on the reverse catch, which made rapid upward changes into third difficult for unpractised drivers—a fact which may be reflected in the acceleration figures.

### Powerful Brakes

On the question of economy, it is worth mentioning the hard driving that the car received both on flat roads and up long hills without respite in the indirect gears, as showing that the fuel consumption is unlikely to vary much over the likely cruising range of 50-70 m.p.h. It is doubtful whether any owner of a Lancia would willingly restrict his speed to that at which nearly 40 m.p.g. can be obtained, but he derives a useful bonus (equivalent to about 2 m.p.g.) from the the use of standard grade fuel, which in Italy is rated at 70-72 octane. Despite the 7.4/1 compression ratio there was only a trace of pinking on this grade.

Gentle trickling through traffic in top gear is perfectly possible, but this again is unlikely to be the habit of the keen driver to whom this kind of car will appeal.

Our excursion into the mountains which stand almost at the factory gates demonstrated another feature for which, significantly, cars from Turin have long been famous. For a car weighing only 17 cwt., the brakes of the Appia have a friction lining area of no less than 138 sq. in., in drums of 9 in. diameter. Good though not outstanding in ultimate stopping power, they give unusually effective results for light pedal pressure, have none of the "spongy" feel which is so common, and leave a comforting impression that however long and steep the hill there is no chance of their fading away in a cloud of smoke. Clean external lines have not been allowed to take the place of cool brakes, and air is led to the front drums through ducts behind the radiator grille.

Suspension and steering together play a large part in deciding the character of a car, and the character, in the case of the Appia, is decidedly reminiscent of some of its vintage forebears. In fact, the same system of front suspension (and an early form of monocoque body structure) were first used in the Lancia Lambda which was shown at Olympia in 1922, and the comparatively short vertical travel of the front wheels—about 3½ in. between bump and rebound buffers—is inherent in this arrangement. The ride is consequently rather harder than others in current use; "more lively" might be a more precise definition, in contrast to the dead, floating ride more often associated with coil springs, but by no means uncomfortable for front or rear seat passengers. There is more roll than might be expected, and enthusiastic attacks on hairpin corners with an uneven road surface caused the car to lean over enough to touch the rubber stops of the suspension on bumps, sending back a succession of small shocks.

For most of the period of the test, the majority of roads were covered with the peculiarly treacherous film of mud indigenous to northern Italy in early winter, while most of the better sections were merely wet. Under similar conditions the roadholding of many cars which behave well on a dry road takes on a different aspect altogether, and the Appia is a very notable exception. It seems probable that

The cloth-covered seats are comfortable for driver and passengers, and those at the front are adjustable to suit the longest legs. In this picture, the near-side doors have been removed.

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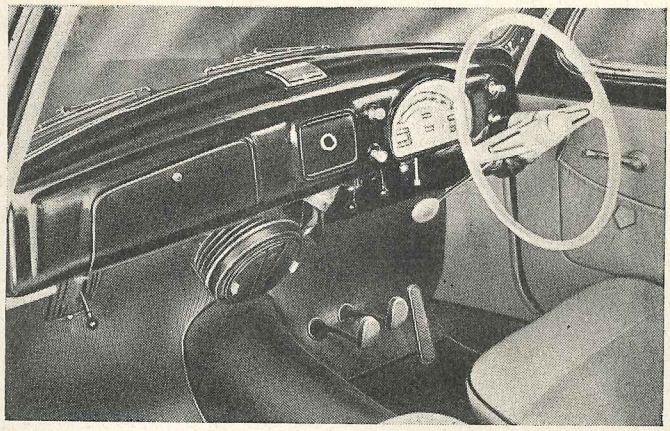
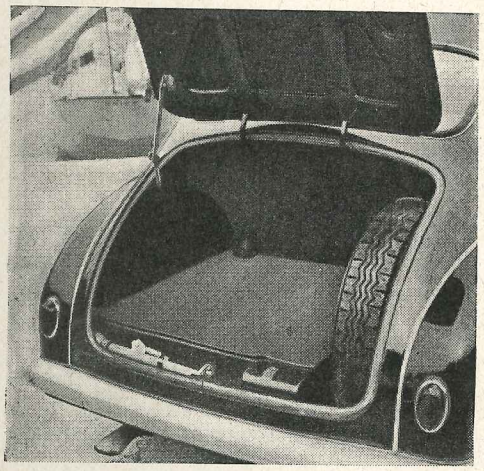


Modern, but quite pleasantly simple, the facia has all instruments grouped in front of the driver, while many of the minor controls are slung beneath the panel. The heater is of the re-circulating type, but there are two fresh-air ventilators on the toe-board.

low-pressure tyres and an equal distribution of weight on front and rear wheels contribute largely to an extraordinary resistance to break-away on corners, and the adhesion is also appreciated in driving over city cobblestones and tramlines. By being exactly neutral between under- and oversteer, the car achieves stability together with outstandingly light and sensitive control; a feeling that there is some incipient oversteer is never quite justified, and the answer probably lies in maintenance of just the proper balance of tyre pressures.



Luggage space is reasonable for a compact car, and the spare wheel can be removed without disturbing the other contents.

Perfect control over the car is made easier by a well-placed two-spoke steering wheel and pedals which allow plenty of space for the left foot, while the separate front seats—of a fairly "sit-up" nature—put the Appia in the far-from-crowded class of small cars which can be driven by large people. Rear-seat kneeroom is cut down rather sharply, however, when the driving seat is adjusted to suit a very tall driver. Visibility is rather less than perfect, with a moderate blind spot caused by the front pillar, and a bonnet which, though short and falling away, still obscures the nearside wing. Incidentally, the car we tested had right-hand drive which is the rule rather than the exception, for the Appia is the first Lancia model to be made available with left- as an alternative to right-hand control.

A unique feature of the cars from this factory is the absence of centre door pillars, leaving the entire side space of the body free for entry to front or rear seats. The doors are hinged at the extreme front and rear, and the gap between them when closed is sealed by thin rubber strip, there being only a trace of draught entering below the doors of the car tested.

Essentially "modern" in appearance, the plain painted facia has instruments which have suffered rather at the hands of the stylists, but the overall effect is more simple than flashy, and confusion is avoided by placing starter, choke and hand throttle controls (in the form of pendant levers) beneath the panel in company with the bonnet release, heater switch and pull-out hand brake. The last-named is connected by a cable passing over pulleys to a lever under the floor, and has an effective performance equalized between the back wheels. The heater is good, though of recirculating type, and there are two ventilators with separate controls at foot level. A small glove locker in the facia is supplemented by pockets in all the doors.

### Fully Equipped

Interior comforts and conveniences include the well shaped and padded cloth-trimmed upholstery, grab rails on the backs of the front seats and handles for slamming the doors, and twin sun visors. Self-parking wipers clear a large area of the windscreen, and the electrical switch gear is particularly neat, with self-cancelling direction indicators and a horn "button" which extends over the greater part of the twin spokes of the steering wheel. An admirable, robust and finger-light steering-column switch of the type still regrettably rare in this country dips the headlamps, or flashes them if only the side lamps are in use. The driving mirror is a little too high to be fully effective.

Luggage room is fair, slightly reduced perhaps by the generous space allotted to passengers in a very compact car, and easily reached, the spare wheel being clamped vertically at the side. A very useful feature is the provision of strengthened mounting points for a roof rack.

"Traditional" in character, the Appia, as reference to pictures and data page will show, is very far from conservative in either looks or performance. Finely finished, not only on the surface but under the bonnet as well, it is a driver's car.

## Mechanical Specification

**Engine**

| | |
|---|---|
| Cylinders | 20° V 4 |
| Bore | 68 mm. |
| Stroke | 75 mm. |
| Cubic capacity | 1,090 c.c. |
| Piston area | 22.55 sq. in. |
| Valves | pushrod o.h.v. (2 camshafts) |
| Compression ratio | 7.4/1 |
| Max. power | 38 b.h.p. |
| at | 4,800 r.p.m. |
| Piston speed at max. b.h.p. | 2,365 ft. per min. |
| Carburetter | Solex 30 BI downdraught |
| Ignition | Coil |
| Sparking plugs | 14 mm. Marelli CW175F |
| Fuel pump | Mechanical |
| Oil filter | Gauze in sump |

**Transmission**

| | |
|---|---|
| Clutch | s.d.p. |
| Top gear (s/m) | 4.55 |
| 3rd gear (s/m) | 6.45 |
| 2nd gear (s/m) | 9.9 |
| 1st gear | 17.82 |
| Propeller shaft | Open |
| Final drive | Hypoid bevel |

**Chassis**

| | |
|---|---|
| Brakes | S.A.B.I.F. hydraulic |
| Brake drum diameter | 9 in. |
| Friction lining area | 138 sq. in. |
| Suspension: | |
| Front | Independent (coil springs and sliding pillars) |
| Rear | Semi-elliptic |
| Shock absorbers: | |
| Front | Telescopic, integral with suspension |
| Rear | Telescopic |
| Tyres | 155—15 or 5.60—15 |

**Steering**

| | |
|---|---|
| Steering gear | Worm and sector |
| Turning circle | 31 feet |
| Turns of steering wheel, lock to lock | 3 |

**Performance factors** (at laden weight as tested):

| | |
|---|---|
| Piston area, sq. in. per ton | 21.45 |
| Brake lining area, sq. in. per ton | 131 |
| Specific displacement, litres per ton mile | 2,035 |

Fully described in *The Motor*, April 22, 1953

## Coachwork and Equipment

Bumper height with car unladen:
Front (max.) 16 in., (min.) 12½ in.
Rear (max.) 18¼ in., (min.) 15 in.

| | |
|---|---|
| Starting handle | No |
| Battery mounting | Under floor of boot |
| Jack | Screw |
| Jacking points | 2 on sides of car |
| Standard tool kit: | Screwdriver, sparking plug spanner, oil plug spanner, 3 double-ended spanners, 2 double-ended box spanners, adjustable spanner, pliers tommy bar, wheel brace, tool roll. |
| Exterior lights: | Two head, two combined side and direction indicator lamps, two combined rear, stop and direction indicator lamps, number plate lamp. |
| Direction indicators | Self-cancelling winkers |
| Windscreen wipers | 2 electric, self-parking |
| Instruments | Speedometer (with non-decimal trip), oil pressure, fuel contents |
| Warning lights | 3 (dynamo, fuel reserve, trafficators) |
| Locks: | |
| With ignition key | 1 door |
| With other keys | Nil (luggage boot unlocked from inside car) |
| Glove lockers | One on facia with lid |
| Map pockets | Four on doors |
| Parcel shelves | nil |
| Ashtrays | One on facia |
| Cigar lighters | nil |
| Sun visor | Two universally pivoted |
| Interior lights | One in roof |
| Interior heater | Air re-circulating type, with de-misters |
| Car radio | Optional extra |
| Extras available | None |
| Upholstery material | Cloth |
| Floor covering | Front, rubber; rear, pile carpets |
| Exterior colours standardized: | Green, grey, beige, black, maroon, blue. |
| Alternative body styles | None |