

# The SWALLOW Doretti 2-seater



A Luxurious, Fast  
and Economical  
Coach-built 2-litre  
Sports Car

COMBINING good looks with modest wind resistance, the Doretti body is metal framed and combines with the reinforced tubular chassis to make this an exceptionally rigid open car. Conversion from open to closed trim is rapid, even without leaving the car.

FOR a manufacturer not currently engaged in the motor industry, to venture with his first model into the field of high-performance sports cars requires considerable courage; when, in so doing, he produces a car which will not only hold its own in that field, but also looks well and is quite moderately priced, it may be regarded as a remarkable achievement. The Swallow Doretti, first announced to the public at the beginning of this year and released upon the home market two months ago, has a maximum speed of just over 100 m.p.h., handles well and costs around £1,100 inclusive of purchase tax; its looks may be judged from the accompanying pictures.

Powered by the 2-litre Triumph engine, with Triumph gearbox and transmission (including optionally the Laycock de Normanville overdrive), and front suspension units in modified form, the Doretti is of quite individual design in chassis and body. At its announcement, special reference was made to the strength and rigidity of the chassis frame, and an opportunity to prove this arose in our recent test of the car, which included some 700 miles on the worst of Belgium's frequently very rough roads. It must be said straight away that a certain amount of "working" of the body was apparent on the more destructive surfaces, notable at the usual point between the strongly braced scuttle and relatively unsupported doors. Open cars in which this does not happen are, however, very few indeed, and especially in view of its



light weight the Doretti may be accounted far better than most in this respect.

It may, on the face of it, appear a little strange to open a review of a sports car with remarks upon the strength of the bodywork. The Doretti was, in fact, developed with an eye upon two aspects of the American market: the enthusiasts for European-type sports cars, and those who want a fast and good-looking car which is easy to drive and to sit in.

A sleek, practical body which would not rapidly deteriorate was therefore of some importance, but the rigid frame naturally has a more fundamental effect upon the behaviour of the car. The small chassis deflections caused by the Belgian roads referred to appear to be within fine enough limits not to upset the roadholding, even when bumps are met with just at the most awkward part of a corner. Modern, fairly soft, suspension depends upon a really stiff base, and the Doretti has just that.

Firm to the degree normally expected of a modern sports car, the springing is quite soft enough for passenger comfort, which is helped by deeply upholstered bucket seats, although the ear may be slightly

offended by the sound of punishment obviously being taken over rough cobblestones. Wheel movement is extremely well damped, and even with tyres inflated to the 6 lb./sq. in. extra pressure recommended for continuous high speeds there is no tendency to patter. Standing start acceleration tests showed surprisingly little wheel-spin on the dry concrete of the Jabbeke motor road, and the suspension as a whole is a good compromise, giving reasonable riding comfort but keeping the wheels firmly on the ground the whole time.

The Bishop cam steering gear is well suited to the car, lightness and very positive feel being combined most happily. At the same time no jarring is felt through the spring-spoked steering wheel, which might with advantage be adjustable telescopically for the driver who prefers to sit well away from it. The car follows its given path with precision, and is reassuringly stable when, for instance, the longitudinal ridges between concrete road slabs are crossed and recrossed at maximum speed.

There is sufficient castor action, but in cornering less understeer than is fashionable. Roll is slight, and the rear wheels

## In Brief

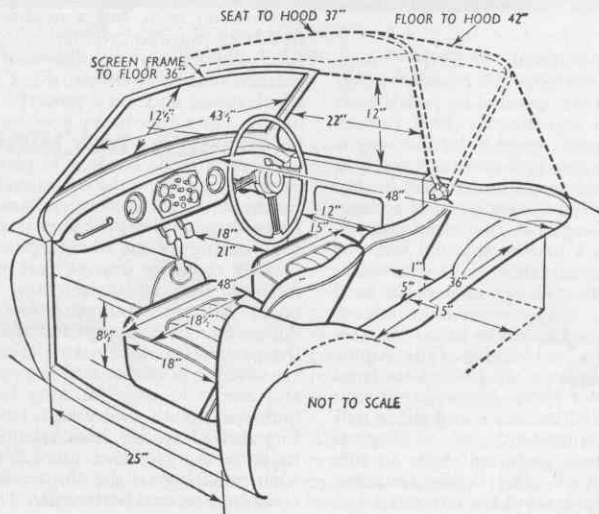
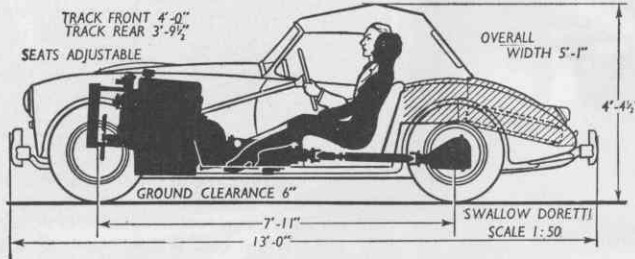
Price (with overdrive) £817 plus purchase tax £341 10s. 10d., equals £1,158 10s. 10d.; (without overdrive £777 basic, £1,101 17s. 6d. total).	
Capacity ... ..	1,991 c.c.
Unladen kerb weight ... ..	19½ cwt.
Fuel consumption ... ..	27.9 m.p.g.
Maximum speed ... ..	100.2 m.p.h.
Maximum speed on 1 in 20 gradient ... ..	87 m.p.h.
Maximum top gear gradient	1 in 8.7
Acceleration:	
10-30 m.p.h. in top ... ..	9.5 sec.
0-50 m.p.h. through gears	8.7 sec.
Gearing: 20.2 m.p.h. in top at 1,000 r.p.m. (24.6 m.p.h. in overdrive); 83.5 m.p.h. at 2,500 ft. per min. piston speed (102 m.p.h. in overdrive).	

# The Motor Road Test No. 27/54 (Continental)

**Make:** Swallow

**Type:** Doretti 2-seater

**Makers:** The Swallow Coachbuilding Co. (1935) Ltd., The Airport, Walsall, Staffs.



**WEIGHT**

Unladen kerb weight .. .. 19 1/2 cwt.  
 Front/rear weight distribution .. 52/48  
 Weight laden as tested .. .. 23 cwt.

**Test Data**

**CONDITIONS:** Warm, dry weather with little wind. Smooth concrete road surface. Premium grade pump fuel. Tests made with hood and side-screens erect, and with tyre pressures raised by 6 lb./sq. in. as advised for high-speed driving.

**INSTRUMENTS**

Speedometer at 30 m.p.h. .. .. 2% slow  
 Speedometer at 60 m.p.h. .. .. 1% fast  
 Speedometer at 90 m.p.h. .. .. 2% fast  
 Distance recorder .. .. Accurate

**MAXIMUM SPEEDS**

Flying Kilometre (direct 4th gear)  
 Mean of four opposite runs .. 100.2 m.p.h.  
 Best time equals .. .. 101.7 m.p.h.

Flying Kilometre (Overdrive gear)  
 Mean of two opposite runs .. 96.8 m.p.h.

**Speeds in gears** (at recommended r.p.m. limit)  
 Max. speed in 3rd gear .. .. 76 m.p.h.  
 Max. speed in 2nd gear .. .. 50 m.p.h.  
 Max. speed in 1st gear .. .. 30 m.p.h.

**FUEL CONSUMPTION** (Overdrive gear)

53.5 m.p.g. at constant 30 m.p.h.  
 51.0 m.p.g. at constant 40 m.p.h.  
 44.5 m.p.g. at constant 50 m.p.h.  
 39.5 m.p.g. at constant 60 m.p.h.  
 34.5 m.p.g. at constant 70 m.p.h.  
 29.5 m.p.g. at constant 80 m.p.h.  
 24.5 m.p.g. at constant 90 m.p.h.  
 Overall consumption for 988 miles, 35.4 gallons,  
 = 27.9 m.p.g.  
 Fuel tank capacity 12 1/2 gallons.

**ACCELERATION TIMES Through Gears**

0-30 m.p.h.	3.9 sec.
0-40 m.p.h.	6.0 sec.
0-50 m.p.h.	8.7 sec.
0-60 m.p.h.	12.3 sec.
0-70 m.p.h.	17.3 sec.
0-80 m.p.h.	24.0 sec.
0-90 m.p.h.	34.8 sec.
Standing Quarter Mile	19.1 sec.

**ACCELERATION TIMES on Three Upper Ratios**

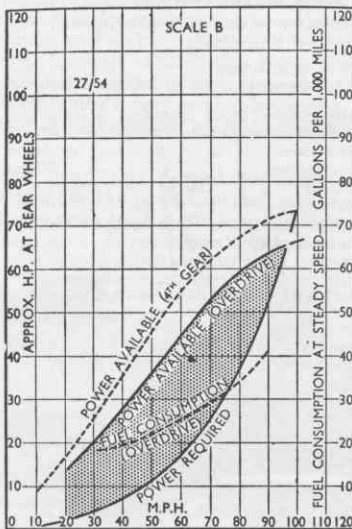
	Overdrive	Top	3rd.
10-30 m.p.h.	—	9.5 sec.	7.0 sec.
20-40 m.p.h.	11.9 sec.	9.2 sec.	6.6 sec.
30-50 m.p.h.	12.5 sec.	9.7 sec.	6.7 sec.
40-60 m.p.h.	14.1 sec.	10.3 sec.	7.4 sec.
50-70 m.p.h.	15.6 sec.	10.9 sec.	8.5 sec.
60-80 m.p.h.	18.5 sec.	12.9 sec.	—
70-90 m.p.h.	28.3 sec.	18.0 sec.	—

**HILL CLIMBING** (at steady speeds)

Max. top gear speed on 1 in 20 .. .. 87 m.p.h. (overdrive 77 m.p.h.)  
 Max. top gear speed on 1 in 15 .. .. 80 m.p.h. (overdrive 63 m.p.h.)  
 Max. top gear speed on 1 in 10 .. .. 59 m.p.h.  
 Max. gradient on overdrive gear .. .. 1 in 11.4 (Tapley 195 lb./ton)  
 Max. gradient on top gear .. .. 1 in 8.7 (Tapley 255 lb./ton)  
 Max. gradient on 3rd gear .. .. 1 in 6.5 (Tapley 340 lb./ton)  
 Max. gradient on 2nd gear .. .. 1 in 4.3 (Tapley 510 lb./ton)

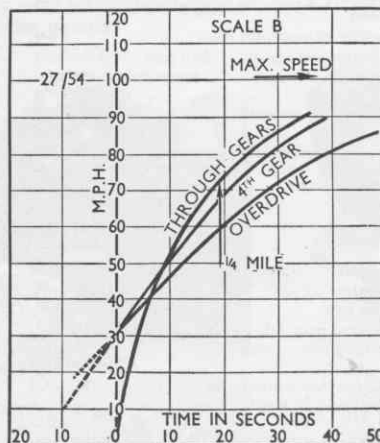
**BRAKES** at 30 m.p.h.

0.99 g retardation (= 30 1/2 ft. stopping distance) with 90 lb. pedal pressure  
 0.83 g retardation (= 36 1/2 ft. stopping distance) with 75 lb. pedal pressure  
 0.56 g retardation (= 54 ft. stopping distance) with 50 lb. pedal pressure  
 0.31 g retardation (= 104 ft. stopping distance) with 25 lb. pedal pressure



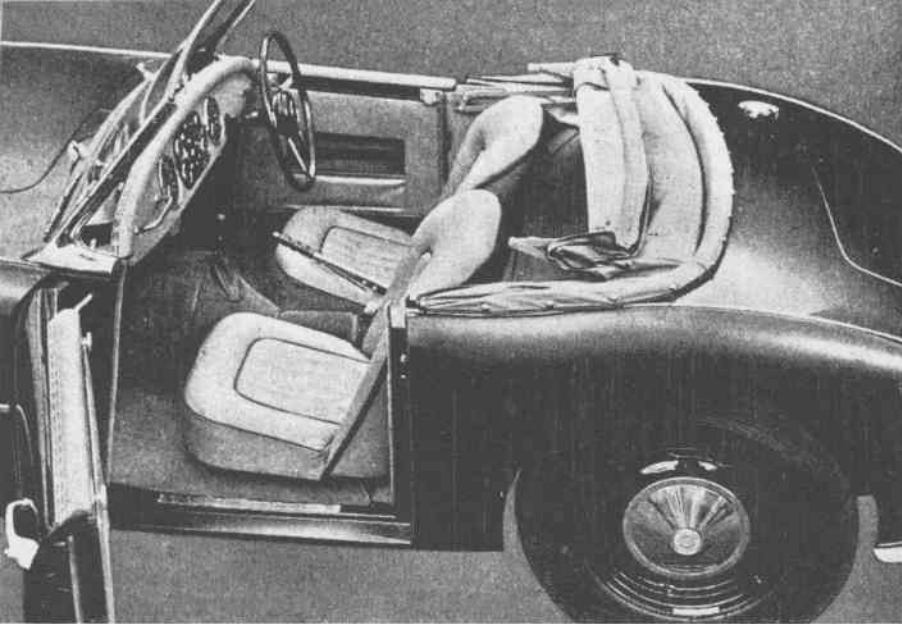
Drag at 10 m.p.h. .. .. 23 lb.  
 Drag at 60 m.p.h. .. .. 107 lb.

Specific Fuel Consumption when cruising at 80% of maximum speed (i.e., 80.2 m.p.h.) on level road, based on power delivered to rear wheels .. .. 0.59 pints/b.h.p./hr.



**Maintenance**

**Sump:** 11 pints, S.A.E. 30 summer, S.A.E. 20 winter. **Gearbox:** 1 1/2 pints, S.A.E. 30 (3 1/2 pints with overdrive). **Rear Axle:** 1 1/2 pints S.A.E. 90 E.P. gear oil. **Steering gear:** S.A.E. 90 E.P. gear oil. **Radiator:** 14 pints, (2 drain taps). **Chassis lubrication:** By grease gun every 1,000 miles to 13 points, every 5,000 miles to 9 further points. **Ignition timing:** 4°-6° B.T.D.C. **Spark plug gap:** 0.032 in. **Contact breaker gap:** 0.015 in. **Valve timing:** I.O., 15° B.T.D.C.; I.C., 55° A.B.D.C.; E.O., 55° B.B.D.C.; E.C. 15° A.T.D.C. **Tappet clearances:** (Cold) Inlet 0.010 in. Exhaust 0.012 in. **Front wheel toe-in:** 1/4 in. **Camber angle:** 2° (static laden). **Castor angle:** 3°. **Tyre pressures:** Front 22 lb. Rear 24 lb. (increase by 6 lb. for high cruising speeds). **Brake fluid:** Lockheed orange. **Battery:** 12 volt, 51 amp./hr., Lucas type GTW9A/2. **Lamp bulbs:** Headlamps 60/36 watt.; Side and tail, 18/6 watt.; Number plate and brake lamps, 6 watt.; Direction indicator warning light, 2.2 watt.; Panel light, 2.2 watt.



UPRIGHT seats are very well upholstered. Visible also is leather trimming over the padded scuttle edge, the central gear lever, two capacious pockets in the doors, and a large transmission hump which proved rather too warm on the test model.

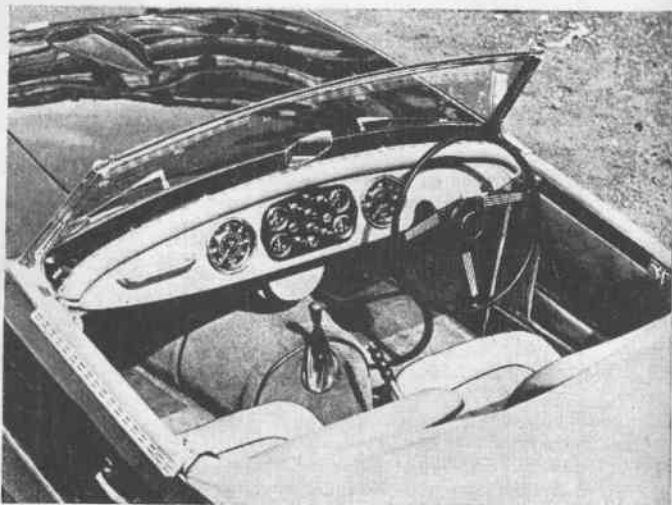
eventually lose adhesion first, quite definitely, but with ample preliminary warning. It is, in fact, the kind of road-holding which is fun for the experienced driver, and also safe for the novice.

The brakes seem to be in keeping—"seem to be" because on the test car, which had been supplied at short notice, there was some erratic grabbing, possibly due to dust in one of the front drums. However, when Tapley meter and pedal pressure gauge were applied, the trouble had temporarily cured itself, and the remarkably good figure of 0.99 g retardation was recorded for only 90 lb. pressure. A pull-up hand brake of the fly-off type is placed a trifle awkwardly, high up on the propeller shaft tunnel between the seats.

#### Comfortable Seating

The cockpit shows evidence of thinking along the right lines, but with a few irritating details still left unsolved. The bucket seats are well-padded, and are very comfortable indeed for those who like to sit bolt upright. Anyone who tries to adopt a more reclining position will find himself without support for the small of his back. A fair measure of protection is offered by the body sides, yet a driver of medium height sits high enough to have a good view without peering over the wheel. Both wings are visible, of course, over the sloping bonnet, as well as an apparently purposeless bulge in the middle. The head-room with the car closed is adequate for the really tall driver and heavy rain failed to penetrate the car with sidescreens in position. The central driving mirror gives a wide outlook with hood up or down. Unusual frameless plastic sidescreens fit over lugs in the doors, and can be slid backwards slightly to provide ventilation. Hinged hand-signalling panels are incorporated in the sidescreens, providing some fresh air so long as there was sufficient friction in the hinges to keep them open. With sidescreens erect and hood down there is less draught than in many open cars, and indeed on a day of real summer

WELL TRIMMED and well furnished, the interior has neat and visible instruments, with a rather confusing array of push-pull switches in the centre. Interior door handles are well placed inside the large pocket.



the occupants can be uncomfortably hot. The absence of any kind of bonnet louvres perhaps plays some part in forcing hot air to escape below the floor, and interior space is limited somewhat by a very bulky cylindrical cover—in size approximating to half a 5-gallon oil drum, split along its axis

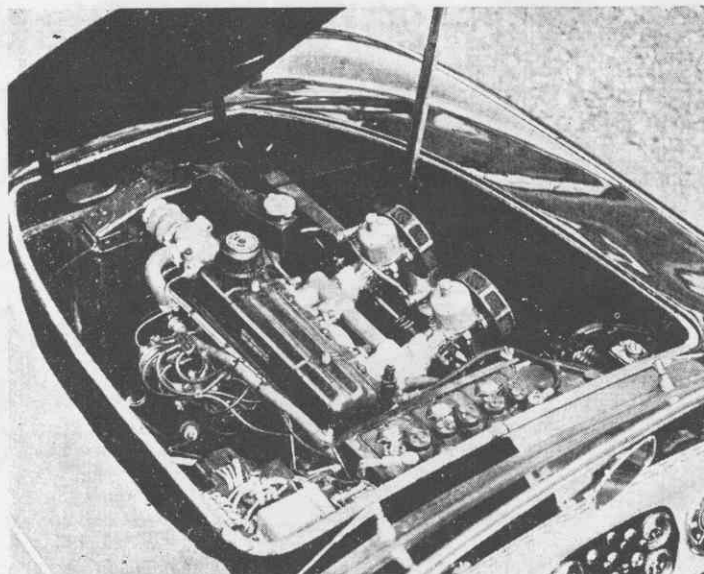
—which connects the clutch bell-housing and the central lever of the remote controlled 4-speed gearbox. When not operating the clutch, the left foot has to be retracted to a position rather near the dip switch or under the pedals, but the pedals themselves are well placed and do their respective jobs smoothly and positively.

Fully suitable for dawdling in traffic or out of it, the Doretta nevertheless likes to be driven, and the delightful Triumph gearbox in particular is a permanent lure for the enthusiast. The engine revs freely, to a red-line limit of 5,000 r.p.m., at which it shows no signs of bursting. On the car with which we were concerned there were some indications that the engine was not yet at its best after less than 3,000 miles, and an appreciably higher top speed was registered in direct 4th gear than in overdrive. The exhaust note was a pleasant and

quite even burble, rather loud but free from embarrassing resonances at any speed, and there was only relatively little pinking on ordinary English and Belgian premium grades of fuel. The advantages of the Laycock overdrive are apparent both in quieter running at speeds over about 20



SOLO motoring in cold weather can be both comfortable and well ventilated, with the interior heater operating beneath the three-quarter tonneau cover



## Mechanical Specification

<b>Engine</b>	
Cylinders ... ..	4
Bore ... ..	83 mm.
Stroke ... ..	92 mm.
Cubic capacity ... ..	1,991 c.c.
Piston area ... ..	33.5 sq. in.
Valves ... ..	Overhead (push rods)
Compression ratio ... ..	8.5:1
Max. power ... ..	90 b.h.p.
at ... ..	4,800 r.p.m.
Piston speed at max. b.h.p. ... ..	2,900 ft. per min.
Carburetter ... ..	Two S.U. (type H4)
Ignition ... ..	Coil
Spark plug ... ..	Champion L105 (14 mm.)
Fuel pump ... ..	AC mechanical
Oil filter ... ..	Purolator by-pass
<b>Transmission</b>	
Clutch ... ..	Borg and Beck
Overdrive ... ..	3.03
Top gear (s/m) ... ..	3.7
3rd gear (s/m) ... ..	4.9
2nd gear (s/m) ... ..	7.4
1st gear ... ..	12.5
Propeller shaft ... ..	Hardy Spicer, open
Final drive ... ..	Hypoid bevel
Top gear m.p.h. at 1,000 r.p.m. ... ..	20.2
(Overdrive 24.6)	
Top gear m.p.h. at 1,000 ft/min	
piston speed ... ..	33.4 (overdrive 40.8)
<b>Chassis</b>	
Brakes ... ..	Lockheed hydraulic (2 L.S. front)
Brake drum diameter: Front ... ..	10 in.
... .. Rear ... ..	9 in.
Friction lining area ... ..	148 sq. in.
Suspension:	
Front ... ..	Coil springs and wishbones
Rear ... ..	Semi-elliptic
Shock absorbers:	
Front ... ..	Armstrong telescopic
Rear ... ..	Armstrong piston type
Tyres ... ..	Dunlop 5.50-15
<b>Steering</b>	
Steering gear ... ..	Bishop cam
Turning circle ... ..	Left, 34 feet, right 32 feet
Turns of steering wheel, lock to lock ... ..	2½
<b>Performance factors (at laden weight as tested):</b>	
Piston area, sq. in. per ton ... ..	29.2
Brake lining area, sq. in. per ton ... ..	129
Specific displacement, litres per ton mile ... ..	2,580 (overdrive 2,110)
Fully described in <i>The Motor</i> , January 6, 1954	

SAFELY hinged at its forward edge so that it cannot fly open, the bonnet panel gives satisfactorily easy access to the overhead valvegear, ignition distributor, twin S.U. carburetters, battery, electrical fuses and regulators, and hydraulic control master cylinders.

m.p.h., and in fuel economy figures which readily better 30 miles per gallon. The electrically-operated change is positive and instantaneous in either direction (it is effective only from top gear), and it is a pity that the pull-out switch is located in the very midst of a group of identical switches in the centre of the fascia. Confusion of these controls is more than just a possibility—we did, in fact, once succeed in extinguishing the headlamps when attempting to change down to direct top gear for rapid acceleration; a removal of the switch to a more isolated position by

of the latter will very quickly be tidied up as experience is gained. The doors are wide enough to make the car easy to get into, and high enough to clear most kerbs, even with a cambered road. They have outside handles, without keys but able to be locked from inside to discourage idle curiosity, and then openable only through the sidescreen hinged panels. The fabric hood is one of the easiest and quickest to erect single-handed, whereas the full-length tonneau cover is exceptionally slow to fit or remove. Both bonnet and boot are held by remote-controlled latches which

are inclined to stick unless pressure is applied to the panels. The only real luggage space is behind the seats, as the spare wheel almost fills the boot, which does, however, also accommodate the tools and tonneau cover, together with the sidescreens in an undivided canvas bag in which they are rather liable to scratch one another. No reserve petrol tap is fitted, but the 12½-gallon tank allows upwards of 300 miles non-stop driving, so that a long run can be made before the fuel gauge says "empty." Besides the speedometer and tachometer already mentioned, instruments include water thermometer, oil-pressure gauge, fuel gauge and ammeter. The winking indicator switch returns automatically; the windscreen wipers are not self-parking.

As a fully-equipped sports car which offers comfort, 100-m.p.h. performance, low running costs and delightful road manners, the Doretta is an attractive newcomer to British and other markets. The enterprising spirit which has translated an idea into a praiseworthy reality is backed by quite substantial resources, and we are confident that no opportunity of improving this model still further will be missed by the Swallow Coachbuilding Co.

## Coachwork and Equipment

<b>Bumper height with car unladen:</b>	
Front (max.) 18½ in., (min.) 9 in.	
Rear (max.) 22 in., (min.) 12½ in.	
Starting handle ... ..	No
Battery mounting ... ..	Under bonnet
Jack ... ..	Smith's ratchet type
Jacking points: One on each side of frame at centre (access from inside car)	
Standard tool kit: Wheel brace, jack, ignition gap gauges, nave plate removal tool, spanners.	
Exterior lights: Two head lamps, 2 sidelamps, 2 tail, stop and turn indicator lamps, rear number plate lamp.	
Direction indicators ... ..	Winker type, self-cancelling
Windscreen wipers ... ..	Two-blade electrically operated, non self-parking
Sun vizors ... ..	No
Instruments: Rev counter, speedometer with decimal trip, fuel gauge, oil pressure gauge, ammeter, water temperature gauge.	
Warning lights: Headlamp main beam, ignition and winkers.	
Locks: With ignition key ... ..	Ignition
With other keys ... ..	None
Glove lockers ... ..	No
Map pockets ... ..	2 in doors
Parcel shelves ... ..	No
Ashtrays ... ..	No
Cigar lighters ... ..	No
Interior lights ... ..	Panel light only
Interior heater (standard) ... ..	Smith's 2 kw.
Car radio (optional) ... ..	Smith's Radiomobile
Extras available: Overdrive, speed kit (Aero screens, metal cockpit cover, undershield, half-spats for rear wheels), wire wheels.	
Upholstery material ... ..	Leather
Floor covering ... ..	Carpet
Exterior colours standardized: Grey, blue, red, cream, white and black.	
Alternative body styles ... ..	None



COATS and other small or flexible items can be stowed in the rear locker, although a major part of the space is occupied by the spare wheel. An automatic-locking strut holds the lid up when it has been opened.

the driver's off-side hand would be most desirable. A further improvement, so far as enthusiasts are concerned, would be made by exchanging the speedometer, at present in front of the driver, with the rev counter, which is the most distant of all the instruments and one of the most valued.

Good and disappointing features appear in the Doretta; the makers have come into the car market with serious intentions, and willing to learn and it is likely that many