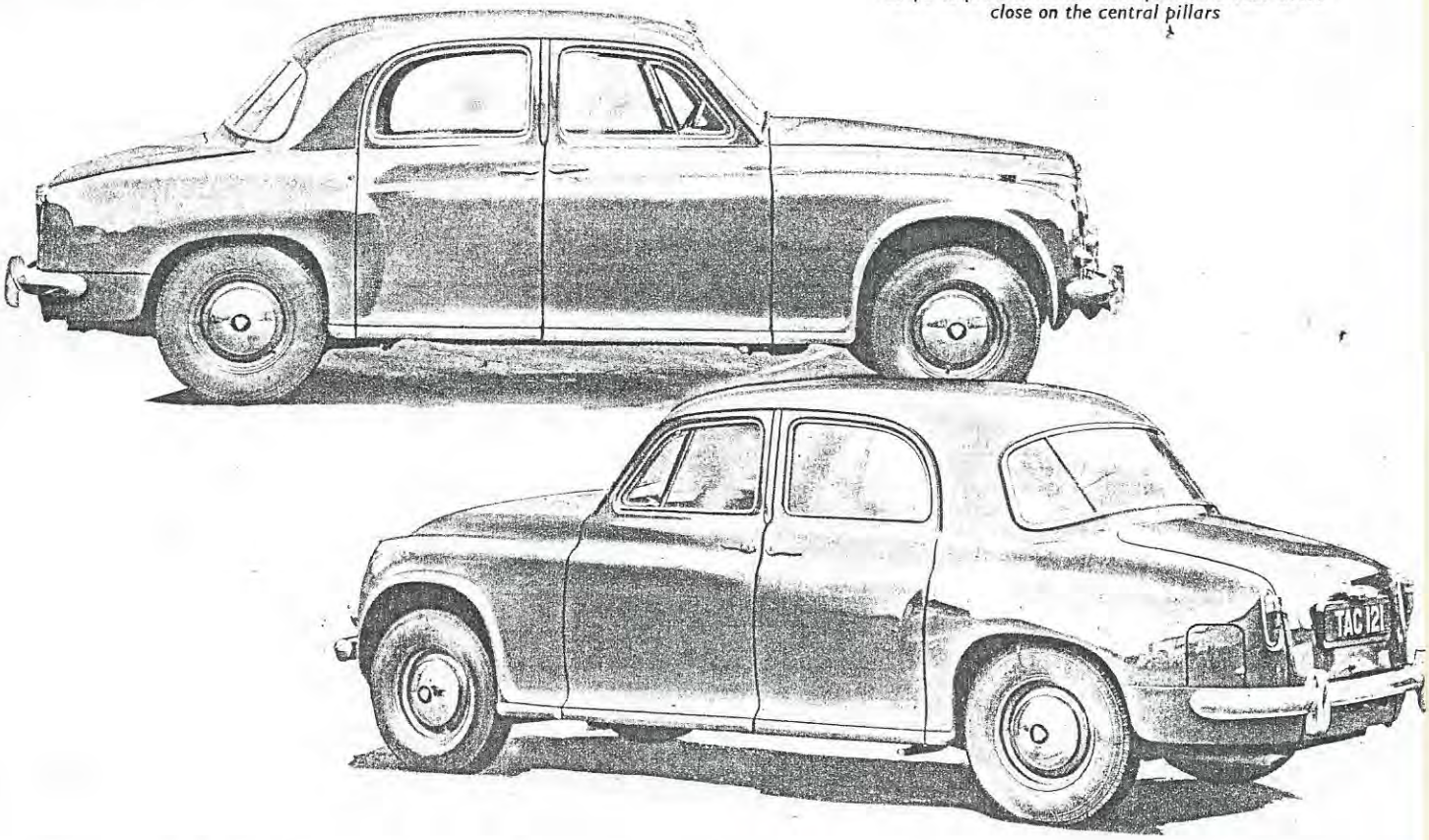
The Autocar ROAD TESTS

No. 1587

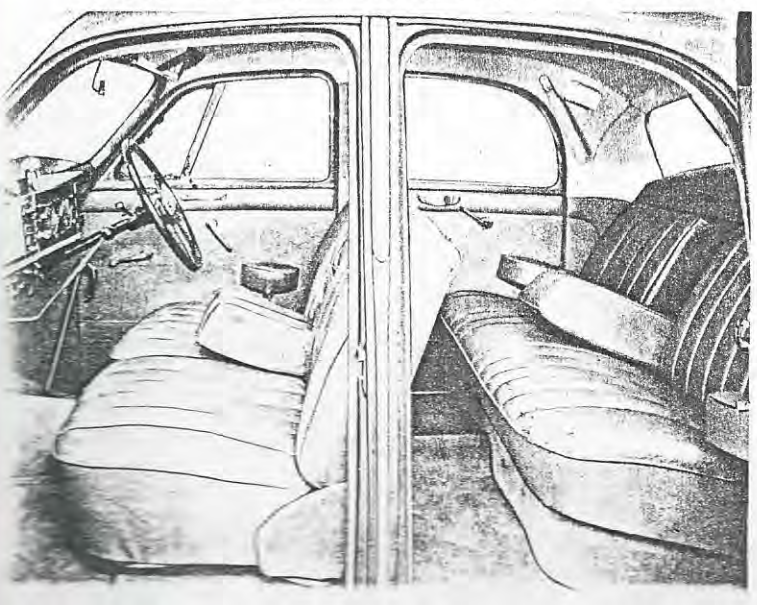
ROVER 90

The most noticeable external differences between the current 90 and its predecessor is the higher wing line aft of the rear axle centre line, the vertical rear lamps and the wrap round rear window. The lower edges of the doors have plated strips to protect them. Both front and rear doors close on the central pillars



THERE will always be a market for good possessions in this mass production age. The market is provided by men and women who appreciate those things that are just that little bit better than their counterparts. They may not be so bright in colour, so "last-word" in styling, and therefore they will not appeal to the owner whose tastes verge on the flamboyant.

The Rover 90 saloon qualifies for inclusion amongst those present-day products which are covetable. It is not hand made in the true sense of the word—few cars are these days—but very precise production methods are employed in the factory. The car has something about it which is difficult to describe. It tends to make the driver try to drive better than he usually does, a feeling which has occurred with only one or two other cars; they were equally out of the top drawer.

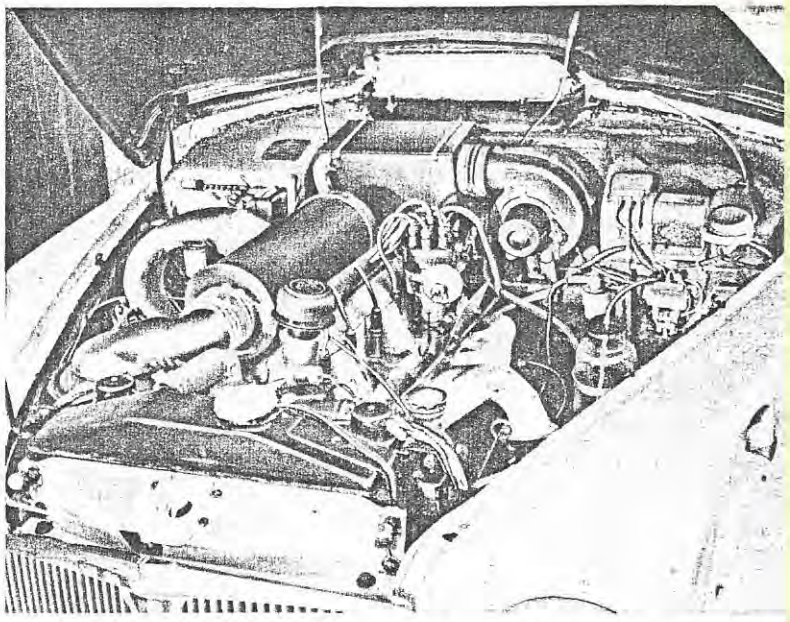


Since the last road test of a Rover 90 the rear axle ratio has been fixed at 4.3 to 1. Previously there was an alternative ratio of 3.9 to 1. With the present model, however, the customer is offered the addition of a Laycock-de Normanville overdrive, if he requires it, and this, together with a higher compression ratio and consequent power output (previously 6.73 to 1 and 90 b.h.p. at 4,500 r.p.m.), gives the owner of the current 90 both economy and higher cruising speeds.

The introduction of the 7.5 to 1 compression ratio has not impaired the smoothness and silence of the engine, features for which the Rover has become well known. When the six-cylinder unit is idling, the instruments are the only indication that it is turning over. This smoothness is apparent up to the point of valve bounce, a state of affairs which can occur only when using the intermediate gears. Performance on top gear is very good, acceleration from just below 12 m.p.h. up to the maximum being achieved without a trace of protest or vibration.

As the extra power output has to deal with a slight increase in weight, there is little or no improvement in the acceleration figures, but maximum speed has increased and the fuel consumption figures show a slight improvement. The engine gives the car a lively performance if the driver wishes it, and there is immediate response to the combination of throttle and gear box.

Real leather, thick carpets and polished wood with an absence of screw heads put the bodywork of the Rover 90 in the luxury class



A great deal of equipment occupies the underbonnet space of the modern car in addition to the engine, and the Rover is no exception. Oil level dipstick, oil filler, sparking plugs and distributor are all very accessible. Adjustable rubber stops to prevent the bonnet drumming are fitted to the radiator cowl

It is the type of car which grows on one, and the manner in which the engine delivers its power adds to the comfort and well-being of the occupants. There is an almost turbine feel about its progress. The effect is the same whether the engine is turning over slowly taking the car through traffic, or approaching peak r.p.m. as a steep hill is stormed in third and second gears.

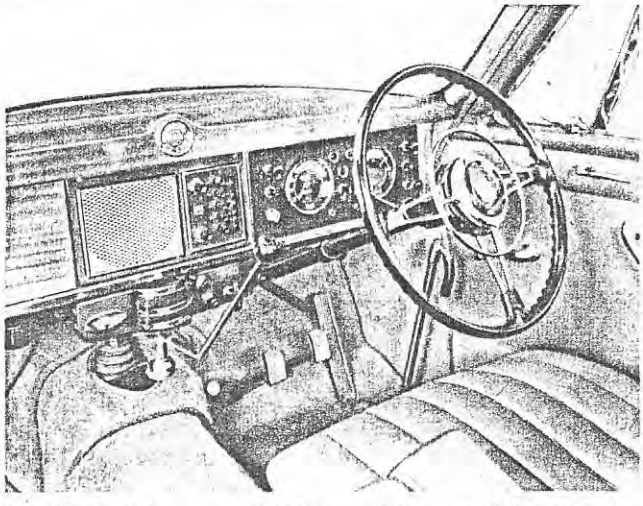
The manufacturers have gone even further into the question of silencing recently and have reduced carburettor intake noise to an extremely low level. A new oil-bath air cleaner is connected to a horizontal silencer which, in turn, is connected to the carburettor by a light alloy pipe. The picture on this page shows the arrangement.

As might be expected, the engine starts as soon as the starter is pressed, even after a winter night in the open. The mixture control for cold starting takes the form of a sturdy T-shaped handle. It provides a correct throttle setting as well as rich mixture, and if it is left out an amber warning light comes on when the engine reaches normal temperature.

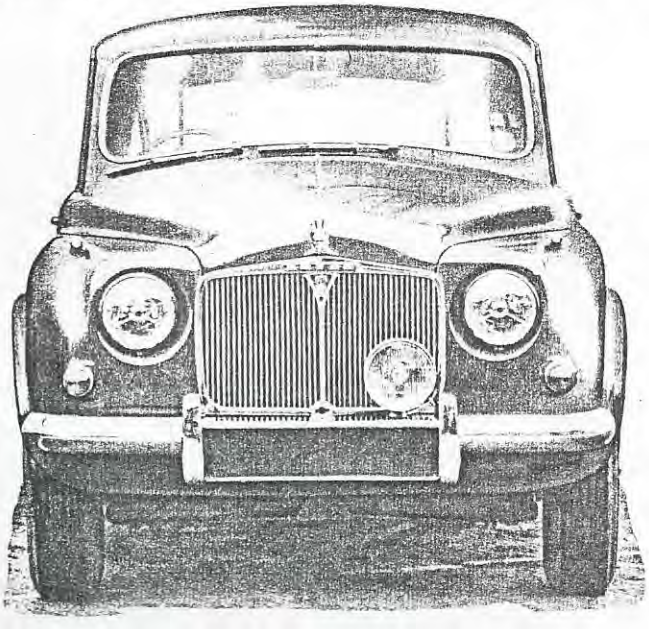
Up to now, Rover cars have, over the years, been equipped with a free wheel, but on the latest 90 it is dispensed with, the overdrive replacing it on the end of the gear box. This is brought in or out of action by finger pressure on a small lever switch mounted on the left immediately beneath the steering wheel, and is at all times under the control of the driver. The subdued click of the switch, incidentally, was one of the noisiest features of the car! The change from overdrive to normal top is slightly different from any previously experienced.

With the overdrive engaged the switch can be moved to the normal top position but the actual change will not take place until the throttle is opened. This gives a form of preselection and, once a driver is accustomed to the technique, is extremely useful. For instance, on approaching a corner fast, the lever can be moved to normal top position and then, by opening the throttle at the appropriate moment, normal top accelerates the car round the corner or the engine in the lower gear can be used for braking. A similar preselection technique can be used for acceleration up a moderate gradient.

The overdrive has little effect on the maximum speed of the car, its intention being for lower engine speed and economy in fuel. These it undoubtedly provides.



The circular dials set in a dull black panel form one of the best instrument layouts in production. The steering wheel is deeply notched on its underside and all controls can be easily reached from the driving seat



Orange coloured flashing direction indicators have replaced the white reflectors in the front wings. There are separate side lights on top of the wings; the fog lamp is standard equipment

The type of central gear change lever employed is peculiar to the Rover. In a car which is so difficult to fault this does call for some criticism; it has a flexible feel which is not in keeping with the rest of the controls. On several occasions reverse gear was selected instead of first.

However, the position of the lever is ideal, and, indeed, it is possible to adjust it to suit individual drivers. The gear ratios suit the car well. Third and top are pleasantly close, and second is extremely useful for a spirited performance up a steepish gradient.

The clutch operation is light and under all conditions noiseless gear changes can be made. The rear wheels will spin on a dry surface if full throttle is applied (as when the standing start acceleration figures were being taken). The pedals are well placed as regards both separation and angle of the pads.

Servo assisted brakes, incorporated just before the Earls Court Show last year, are fitted only to the model 90. They permit the driver to make full use of the car's performance with confidence. As can be seen from the performance figures, only light pedal pressure is required for normal braking, and emergency stops can be made without the driver feeling that he is pushing himself into the rear compartment. There was no fade or unevenness throughout the test. Once or twice there was a slight squeal from the front when stopping from a low speed.

The handbrake has a pleasantly definite feel about it.

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The Rover hand brake, on the right-hand side, is a sturdy and workmanlike descendant of the traditional lever. It has an effective, if elaborate, grip and ratchet release. It does not obstruct entry to the driving seat, but the forward position necessitated involves a slight reach.

The car rides well at all speeds. There is no tyre noise, even fast on a winding road, and the back seat ride is even better than that in front, in spite of the fact that a tall person's knees will touch the back of the front seat. The amount of legroom available in the back can vary greatly according to the position of the front seats. Separate seats, an optional extra, were fitted in the test car. A driver's control being aided to a great extent by his bodily comfort, the seating adjustments available on the Rover are praiseworthy and sufficient to suit all types and sizes of driver. The seat can be moved, normal fashion, fore and aft on runners, the height of the cushion can be altered in a few minutes by a spanner from the small toolkit in a drawer below the facia, and the angle of the backrest is also adjustable.

There is no doubt that the Rover arrangement of controls assists driving ability. The steering wheel seems to fall naturally just where it should, and the car can be well placed for a corner, fast or slow. Understeer is noticeable and the steering is light, although castor action is quite strong, increasing the effort necessary on the sharper turns. There are almost four turns of the wheel from lock to lock, but the turning circle is very good, the car being very manœuvrable in crowded streets.

Visibility from the driving seat is commendable, although

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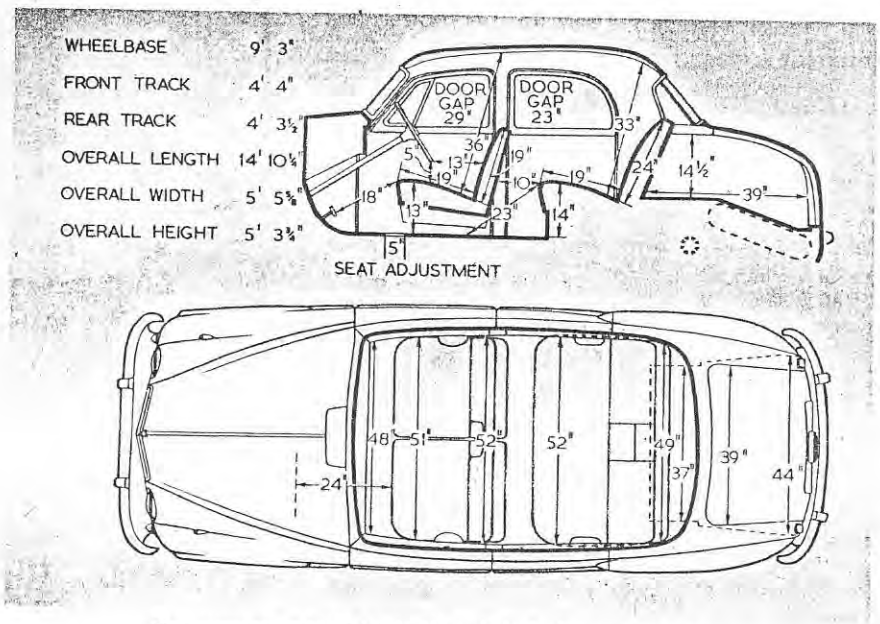


Measurements in these ⅛in to 1ft scale body diagrams are taken with the driving seat in the central position of fore and aft adjustment and with the seat cushions uncompressed

PERFORMANCE

ACCELERATION: from constant speeds.

Speed Range, Gear Ratios and Time in sec.

M.P.H.	3.34 to 1	4.30 to 1	5.923 to 1	8.785 to 1	14.596 to 1
10—30 ..	—	10.2	7.3	5.2	—
20—40 ..	—	10.3	7.7	6.0	—
30—50 ..	—	11.1	8.2	—	—
40—60 ..	16.1	12.0	10.5	—	—
50—70 ..	19.8	14.8	—	—	—
60—80 ..	30.7	23.8	—	—	—

From rest through gears to:

M.P.H.	sec.
30	5.5
50	13.7
60	19.3
70	28.1
80	44.5

Standing quarter mile, 21.6 sec.

SPEEDS ON GEARS:

Gear		M.P.H. (normal and max.)	K.P.H. (normal and max.)
O/D ..	(mean)	89.7	144.4
	(best)	91.0	146.5
Top ..	(mean)	88.2	143.0
	(best)	89.0	143.2
3rd		54—61	87—98
2nd		35—40	56—64
1st		17—24	27—39

TRACTIVE RESISTANCE: 60 lb per ton at 10 m.p.h.

TRACTIVE EFFORT:

	Pull (lb per ton)	Equivalent Gradient
Top	218	1 in 10.2
Third	298	1 in 7.5
Second	421	1 in 5.2

BRAKES:

Efficiency	Pedal Pressure (lb)
68.4 per cent	35
70.8 per cent	50
85.6 per cent	65

FUEL CONSUMPTION:
23.4 m.p.g. overall for 309 miles. (12.12 litres per 100 km.).
Approximate normal range 21-28 m.p.g. (13.4-10.1 litres per 100 km).
Fuel, first grade.

WEATHER: Cloudy, headwind, wet surface.
Air temperature 43 deg. F.
Acceleration figures are the means of several runs in opposite directions.
Tractive effort and resistance obtained by Tapley meter.
Model described in *The Autocar* of September 23, 1955.

SPEEDOMETER CORRECTION: M.P.H.

Car speedometer:	10	20	30	40	50	60	70	80	90
True speed:	8	18	27	37	46	56	65	74	84

DATA

PRICE (basic), with saloon body, **£945.**
British purchase tax, £473 17s.
Total (in Great Britain), **£1,418 17s.**
Extras: Radio **£49 16s.** Overdrive **£67 10s.** Bucket seats **£15.**

ENGINE: Capacity: 2,638 c.c. (161 cu in).
Number of cylinders: 6.
Bore and stroke: 73.025 × 105 mm (2.875 × 4.134in).
Valve gear: overhead inlet, side exhaust.
Compression ratio: 7.5 to 1.
B.H.P.: 93 at 4,500 r.p.m. (B.H.P. per ton laden 55.7).
Torque: 138 lb/ft at 1,750 r.p.m.
M.P.H. per 1,000 r.p.m. on top gear, 18.
M.P.H. per 1,000 r.p.m. on overdrive, 23.3.

WEIGHT: (with 5 gals fuel), 30 cwt (3,360 lb).
Weight distribution (per cent): F, 55.7; R, 44.3.
Laden as tested: 33⅝ cwt (3,735 lb).
Lb per c.c. (laden): 1.4.

BRAKES: Type: F, two trailing shoe; R, leading and trailing shoe.
Method of operation: F, and R, hydraulic, vacuum servo assisted.
Drum dimensions: F, 11in diameter; 3in wide. R, 11in diameter; 2¼in wide.
Lining area: F, 98 sq in. R, 78 sq in (105.5 sq in per ton laden).

TYRES: 600—15in.
Pressures (lb per sq in): F, 28; R, 24 (normal).

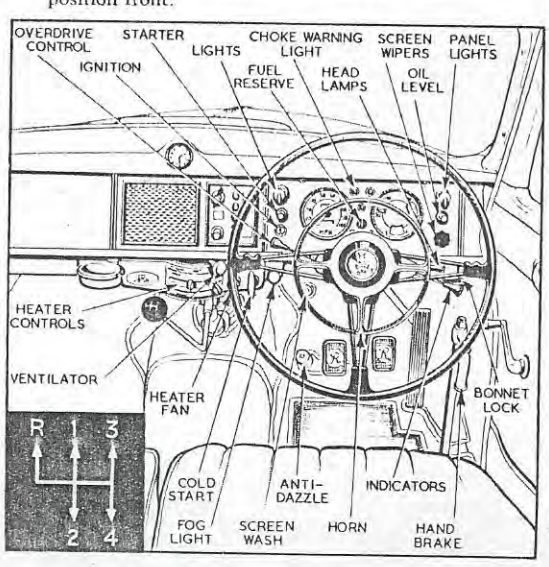
TANK CAPACITY: 11½ Imperial gallons.
Oil sump, 15 pints.
Cooling system, 21 pints.

TURNING CIRCLE: 37ft (L and R).
Steering wheel turns (lock to lock): 4

DIMENSIONS: Wheelbase: 9ft 3in.
Track: F, 4ft 4in; R, 4ft 3¼in.
Length (overall): 14ft 10¼in.
Height: 5ft 3¾in.
Width: 5ft 5⅝in.
Ground clearance: 7½in.
Frontal area: 22.6 sq ft (approximately).

ELECTRICAL SYSTEM: 12-volt; 51 ampere-hour battery.
Head lights: Double dip; 42-36 watt bulbs.

SUSPENSION: Front, independent coil springs and links. Rear, progressive rate half-elliptic leaf springs. Anti-roll bar position front.



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the screen pillars are wider than desirable and on occasions cause some obstruction. The well-placed driving mirror and new-style wrap-round rear window give an extensive rear view. The driver has a sensation of freedom when the window is lowered in the driving side door and the quarter light opened as there is no obstructing metal frame, the quarter light closing on the window to form a seal. These front quarter lights are, however, the cause of much wind noise if they are open when travelling fast.

It is an easy car to get into as the doors close on to the centre pillars. For those critics who may be tempted to decry forward opening rear doors, thinking of young children, it should be mentioned that safely locking catches are fitted to each rear handle; when these are in action the door can be opened only from the outside. Each door has a hinged plated handle to pull it shut, and the window winder on the right-hand front door does not foul the driver's right knee. Arm-rests on the front doors are adjustable for height by a simple action, and there is a hinged strap in each rear quarter. Folding central arm-rests front and rear help to locate the occupants if the car is travelling fast on a winding road.

On the car tested, it was difficult to think of any other accessory that could have added to comfort. The efficient heater and demisting unit is standard equipment, as is the well-placed clock. There is a map light below the top edge of the facia, which comes on when either front door is opened; it has an independent switch, and the rear interior lamps work in the same fashion. The head lamps, which on full beam are quite adequate for the performance of the car, have a separate switch on the right of the steering column; in the dipped position, the beam is much shortened. There is a screen wash operated by a button placed above the foot-operated dipswitch.

The sloping floor of the luggage locker is covered with rubber matting. The jack and wheel brace are housed above the wheel arches, and there is a small lamp in the underside of the lid

The glove box, which has a lock, is one of the largest yet encountered, and there is a map pocket in each front door. A useful provision is a reserve fuel supply of 1½ gallons, controlled by a switch on the facia. Instruments are set immediately in front of the driver, adjustably lit by a rheostat control. They do not reflect in the screen. The windscreen wipers have a two-speed control and are self-parking. There is a starting handle, normally held in clips in the engine compartment, and the owner-driver who does his own maintenance has only four lubrication points to attend to with an oil gun every 3,000 miles. F. V. T.