Rover 2000 1,978 c.c.

BEHIND the scenes, those-in-the-know have been watching the Rover 2000 grow up from a twinkle in its designer's eye over a period of rather more than five years—indeed, it is a kindly joke among Coventry engineers that the first prototypes have already had to undergo M.o.T. five-year tests. Just to look it over, and then to drive it for the first few miles, is sufficient to realize how worth while is such a long gestation period, for the car goes into production mature and properly developed, with very few details still to be sorted out. After two weeks' and 1,650 miles' experience with this new Rover, we rate it one of the outstanding cars of the decade. Moreover, the standard of construction and detail finish are remarkable for a car costing only £1,264 including tax.

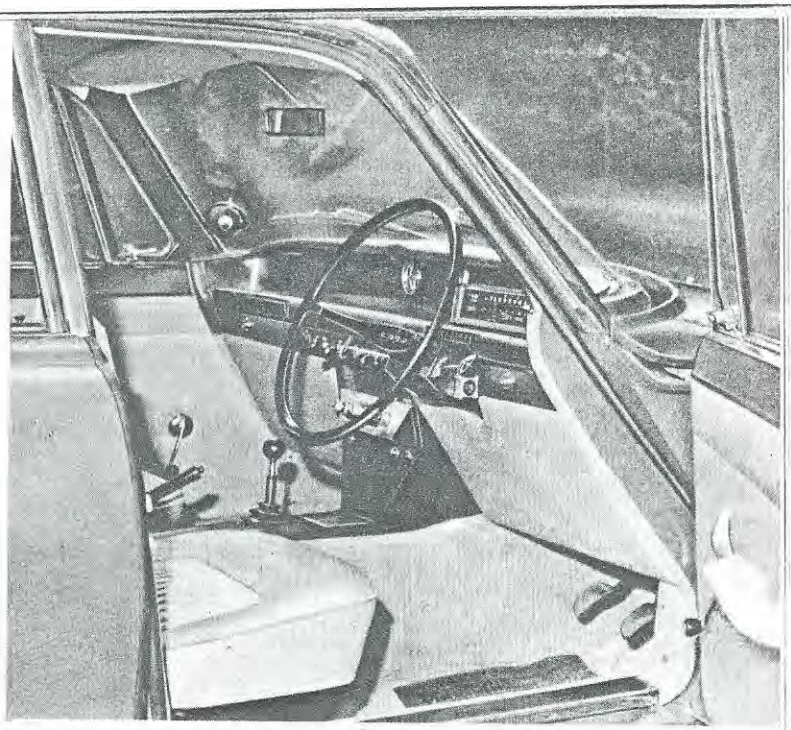
A full description of the 2000 is printed elsewhere in this issue. In brief, therefore, it is a strictly four-seater, four-door saloon powered by an overhead camshaft four-cylinder engine of just under two litres' capacity, able to propel it at a full 100 m.p.h. This drives the rear wheels through a four-speed, all-synchromesh gearbox and a rear axle of the de Dion type incorporating certain very unusual features. The fundamental advantage of the de Dion axle is, of course, low unsprung weight. At the front, too, an unconventional arrangement incorporates large coil springs mounted horizontally, high in the wing valances, to react directly against the scuttle and linked to the wheel assemblies by rocking levers.

In appearance the 2000 has much in common with the latest T4 turbine car, and an outstanding feature concerning the body is that all the mudguard pressings can be unbolted and replaced quickly should they receive minor damage. In fact all the main external pressings—doors, bonnet and boot lid—are unstressed, being attached to a rigid skeleton. In this and certain other respects the Rover has certainly followed the example of the Citroen DS. Gone is any trace of the Rover grille or other distinctive "family" features.

Inside the car, one's attention is immediately drawn to the deep, cushioned panels under the dash, the more obvious because they are trimmed in a light-coloured p.v.c. matching that on the doors and seat backs. With the passenger's seat well forward on its runners the occupant cannot sit with legs crossed, but if this is an inconvenience, it

PRICES	£	s	d
Four-door saloon	1,046	0	0
Purchase tax	218	9	7
Total (in G.B.)	1,264	9	7
Extras (including P.T.)			
Radio (according to make and type)	31 to 34	3 5	6 8
Safety harness (Irving), per pair	10	0	0
Webasto Continental sun roof*	85	0	0
Laminated windscreen*	20	10	10
Rear window heating element (inbuilt)*	19	15	9
Spare wheel carrier on boot lid*	8	3	1

*Not fitted to test car



Left: In the back there is just enough legroom; a huge folding armrest divides the seat, and out of sight here are padded headrests in the quarters. Cushioned rolls topping the front seats are safety features. Right: Enormous carrying space for odds and ends is concealed behind these resilient panels under the dash. The odd pedal angles referred to in the text are obvious here.

seems well worth while for the obvious protection from injury which these panels must provide. Moreover, they form part and parcel with enormously capacious hinged boxes, moulded of flexible plastic and released by locking press-buttons in the facia. That on the driver's side is divided by the steering column, and the narrower section to the left of it has a spring flap for securing most types of folding road-map.

By concentrating the instruments and numerous tell-tales (for direction signals, sidelamps and main beams, ignition, handbrake and low-level in brake fluid reservoir, low oil pressure, and cold-starting mixture) into a compact rectangular box in front of the driver, space has been left for a wide shelf beneath the screen. On later cars than our production prototype, this shelf will be provided with a non-slip covering or other means to restrain loose objects from sliding about. Minor controls are ranged beneath this. They are marked with symbols of their duties, and have distinctive shapes to enable them to be identified at night, once their functions have been memorized.

Adjustable Steering Wheel

Unusual is the provision of an up or down swinging arc adjustment for the steering wheel, with a rotary knob for locking it at the desired setting. The wheel, incidentally, has a particularly comfortable rim section, with its upper surface concave where the thumbs normally rest on it. Behind the wheel at each side are long identical levers, whose purposes may at first be confused one with the other. That on the right sounds the horns (pull back) and works the direction signals (up and down); parallel movements of its opposite number flash the main headlamp beams and raise or dip them. It is rather easy to sound the horns accidentally when signalling direction, or to flash the lamps, when dipping them. On our car, too, the dip-switch was dangerously indefinite, and would sometimes plunge one into a sudden darkness, the more intimidating for the contrast with the vivid blaze of four lamps.

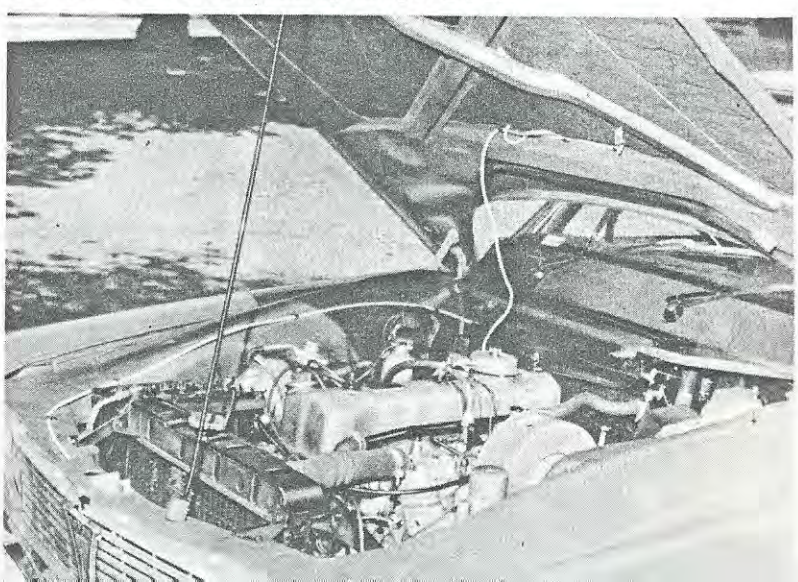
Also open to criticism are the pedal pads for clutch and brake. In repose they are too nearly horizontal, so that a wet or muddy shoe may slip forward on them; and the initial angle of attack is clearly wrong, as early wear on the leading edges of the rubber covers proves. While a maximum load of 43lb when pressing the clutch pedal is average, the arc of movement is such that it feels excessive. The accelerator pedal is satisfactory and its action properly progressive.

Dividing the front compartment (so that the driver cannot slip across easily to use the passenger's door in a home garage or crowded shopping street) is a wide and deep transmission tunnel topped by a short, vertical gear lever and a horizontal handbrake lever between the seats. The gear lever has a very neat, pull-up trigger protecting the reverse slot. Forward of it is a particularly unobtrusive grille, moulded in matt black plastic, for the radio speaker. Also framed in plastic is the rear-view mirror which, being of curved glass to give the panoramic vision favoured by Rover for many years, does not lend itself to any means of dipping. However, this type does limit dazzle from following lamps by reducing them down to pinpoints.

The quality of material, the practicality and neatneess of design and high standard of finish of the interior generally reflect the utmost credit on the Rover company, and collectively they are surely the best of any car in this class. Carefully trimmed in leather of excellent quality, all four seats provide first-class travelling comfort over long journeys. Those in the front have an adjustment for back-rest rake which is infinitely variable between its limits, with friction locks controlled by nicely shaped hand levers above the centre tunnel. Cushions and backrests are shaped to support most people in the right places; they are fairly firmly upholstered, and are well phased to the road springs to give a bounce-free ride.

In the rear compartment the individual backrests, divided by a folding armrest, are quite steeply raked. With the front seats well back on their runners, knee and foot room is somewhat restricted. A third adult could be carried in

The bonnet, lined with sound-deadening material, is not counter-balanced, having a simple prop. A single S.U. carburettor feeds the 90 b.h.p. overhead camshaft engine, which has a light alloy cylinder head. At night, little red tell-tales pick out the front wing tips—but the driver can see only the right-hand one



Make • ROVER Type • 2000

(Front engine, rear wheel drive)

Manufacturer : The Rover Co. Ltd., Solihull, Warwickshire, England

Test Conditions

Weather..... Fine, dry with 10-15 m.p.h. wind
Temperature ..... 13 deg. C. (55 deg. F.)
Barometer ..... 29·5 in. Hg.
Dry tarmacadam and concrete surfaces.

Weight

Kerb weight (with oil, water and half-full fuel tank) 25·0 cwt (2,804lb-1,272kg.)
Front-rear distribution, per cent F. 52; R. 48
Laden as tested ..... 28·0 cwt (3,140lb-1,422kg.)

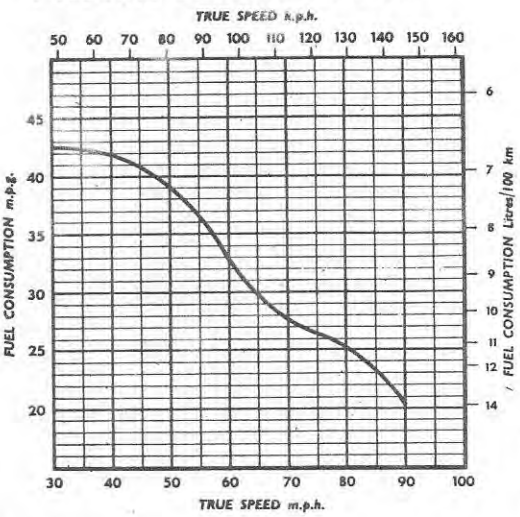
Turning Circles

Between kerbs ..... L. 33ft 11in.; R. 32ft 10in.
Between walls ..... L. 35ft 10in.; R 34ft 10in.
Turns of steering wheel lock to lock ..... 3·9

Performance Data

Top gear m.p.h. per 1,000 r.p.m. ..... 19·1
Mean piston speed at max. power ..... 2,810ft/min.
Engine revs. at mean max. speed ..... 5,370 r.p.m.
B.h.p. (net) per ton laden 64

FUEL AND OIL CONSUMPTION



FUEL ..... Premium Grade (95–97 octane RM)

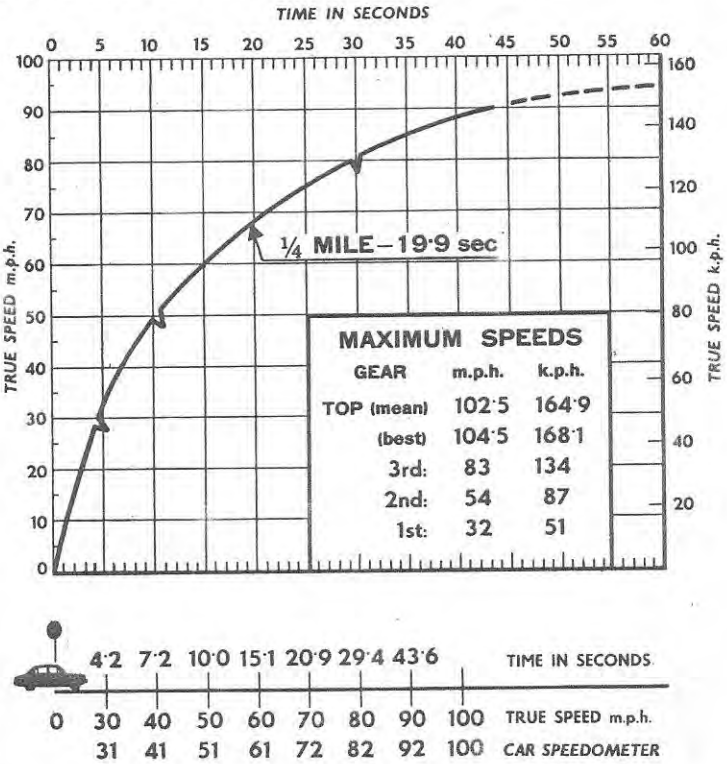
Test Distance ..... 1,650 miles

Overall Consumption ..... 24·0 m.p.g. (11·8 litres/100 km.)

Normal Range ..... 22-28 m.p.g. (12·8–10·1 litres/100 km.)

OIL: SAE 20 ..... Consumption 2,600 m.p.g.

MAXIMUM SPEEDS AND ACCELERATION TIMES



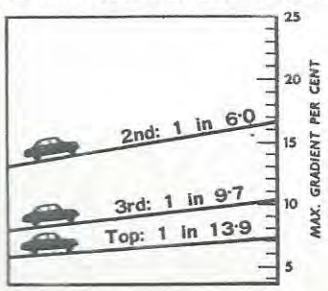
Speed range, gear ratios and time in seconds

m.p.h.	Top	3rd	2nd	1st
	3·54	4·92	7·55	12·83
10—30	—	8·3	5·2	3·6
20—40	10·9	7·6	5·0	—
30—50	10·9	7·9	5·9	—
40—60	12·4	8·7	—	—
50—70	13·6	10·2	—	—
60—80	16·8	14·3	—	—
70—90	23·0	—	—	—

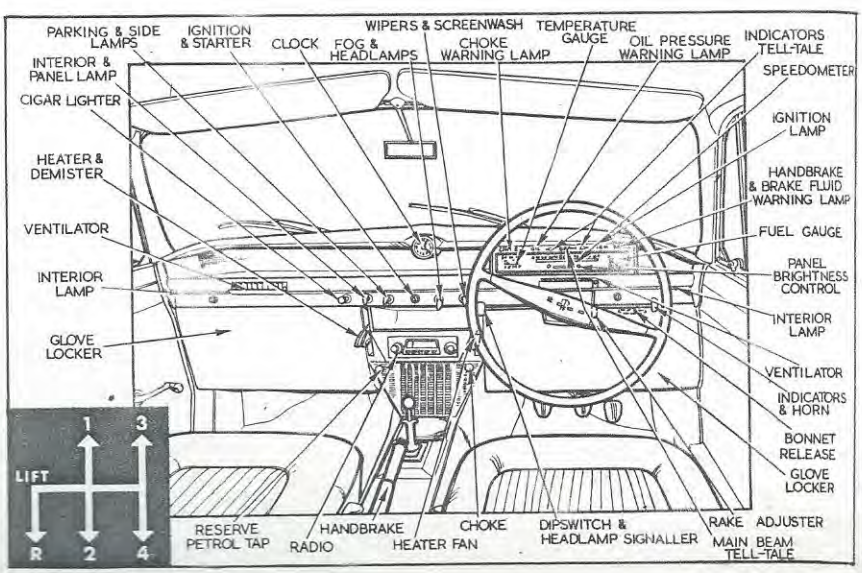
BRAKES (*from 30 m.p.h. in neutral*)	**Pedal load**	**Retardation**	**Equiv. distance**
	25lb	0·40g	75ft
	50lb	0·85g	35ft
	75lb	0·98g	30·8ft
	Handbrake	0·35g	86ft

CLUTCH **Pedal load and travel**—43lb and 5in.

HILL CLIMBING AT STEADY SPEEDS



GEAR	Top	3rd	2nd
PULL (lb per ton)	160	230	370
Speed range (m.p.h.)	50–56	45–52	30–35



There are hinged quarter-vents on each door, and flexible sealing rubbers at each side of the winding windows clear them of mist or rain drops if they are wound down and up once. Rather shallow bumpers protect the car's extremities only. The freedom from ornament is pleasing

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reduced comfort over a short distance, but two adults and a child would be comfortable. A noteworthy point is that the tops of the front seats carry protective rolls to safeguard anyone thrown forward.

Irving safety belts for the front seats (an optional extra fitted to the car tested) were of lap-strap and single diagonal type, very comfortable to wear and having two means of quick adjustment as well as one of the simplest and best buckles there are. But they looked rather untidy when not in use and almost invariably took a little time to sort out before they could be applied.

An otherwise comprehensive and efficient heating and ventilation system lacks only a separate feed to the rear compartment and the means to keep the back window mist-free. However, a rear window with inbuilt heater element figures among the optional extras. To be able to have unheated fresh air directed at one's face through adjustable outlets while the feet are being warmed is a great asset.

Like most modern cars, the new Rover starts easily from cold and quickly warms through, the tell-tale previously mentioned warning if the choke knob has not been pushed home. Sometimes the engine jangled a bit for a few seconds until the hydraulic tensioner for the camshaft driving chain had been pressurized. A generally smooth and capable unit, able to run up to 6,000 r.p.m., it is nowhere in the range so unobtrusive that one could mistake it for a six. Nor is it really so quiet mechanically as one has come to expect of a Rover, becoming quite busy if pressed hard above about 4,000 r.p.m. in the gears, and attracting some sympathetic resonances on the overrun. But it never has the harsh sound or feel of an engine in distress, and there is something rather satisfying about the manner of its going.

High-speed Cruising

On the high top gear it hums along easily and contentedly at anything up to 90 m.p.h. or so as a continuous cruising speed, with little wind roar or other commotion; beyond that point and up to its 100-plus maximum the test car, at any rate, became progressively less relaxed with what seemed to be transmission vibration added to engine noise.

Although rather short of power at low crankshaft speeds, it is reasonably tractable—pulling away quite smoothly from below 1,000 r.p.m. in top—but there was some snatch on the overrun at low revs, more familiar on layouts without the torsional "give" of a transmission incorporating a propeller shaft.

The gear ratio spacings are just right for the character of the car, with maxima of 30, 55, and 85 m.p.h. in the three indirects at 6,000 r.p.m. Third is a marvellous overtaking and hill-storming gear, and is used much more than top in 30-limit driving. The gearbox on this particular car was one of an early batch with known shortcomings, and we understand that those reaching the public will be much improved. Another car tried subsequently had a lighter lever movement and more effective synchromesh, as well as being quieter, particularly in second.

The Rover runs satisfactorily on normal premium fuel, and recorded some exceptionally creditable consumption figures at constant speeds in top gear: for instance, 42 m.p.g. at 40 m.p.h., 32·8 at 60, 25·2 at 80 and 20·5 at 90. For 1,650 miles the overall figure was just over 24 m.p.g., which included a fair proportion in the hands of people who each had to discover for themselves how the car behaved when driven really hard. The 12-gallon tank (with separate change-over switch for the last 1¼ gallons) therefore gives it a practical range in excess of 250 miles.

In the all-important matters of control and ride comfort the Rover 2000 is outstanding and even sets new standards in judging others, especially in the combination of these two qualities. It is a true driver's car that one would itch to take out of its garage at the least excuse. First, the steering: it is light, accurate and responsive at any speed and over any normal surface, the car going exactly where it is pointed without diverting any of the driver's attention or concentration, and remaining directionally stable on steep cambers or when assaulted by gusting side winds.

So level and pitch-free is the ride for all four occupants that one might well suspect some mechanical interaction between front and rear suspensions. Over average roads it is quite practical for passengers to read or even write with very little disturbance. When cornered fast the car heels over very little and the seats provide good lateral support,

The luggage boot is short but exceptionally deep, and Rover offer an external mounting for the spare wheel on the boot lid as a useful extra fitment. The compartment is lit automatically as the lid is opened at night, and the reversing lamp beneath the bumper is standard

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all of which makes for unusually fatigue-free travel. Driven near the limit of tyre adhesion, it handles like a well-bred sports car, a slight understeer finally predominating; and in the wet the light unsprung weight of the de Dion axle pays safety dividends in good traction and freedom from unpredictable skidding. The only peculiarity is a lateral rocking motion, akin to that of a fast-moving railway train, that affects the car over certain surfaces. It is not pronounced, and not everyone would even notice it. Over the usual appalling *pavé* and washboard test surfaces we were as impressed by the obvious strength and rigidity of the car's structure as by its suspension's nonchalant reaction to such treatment.

It seems clear that the Rover development engineers had a road noise problem which is still not completely solved, for even with the Pirelli Cintura radial cord tyres fitted to the test car (Dunlop SPs of similiar design being the specified alternatives) the 2000 does not run so quietly as its larger and heavier stablemates. If this is a penalty for controls that are free from the sponginess that a lot of rubber insulation usually entails, then the small sacrifice is well worth while. The low-speed harshness over "cat's eyes" reflectors and joint strips on concrete roads is likewise a small price to pay for these tyres' good qualities.

Of the Dunlop all-disc brakes (carried inboard at the rear, incidentally) which are supplemented by a vacuum servo, we would criticize only an indirect factor; it is that, as with the clutch pedal already mentioned, the angle of attack of the foot on the pedal accentuates the operating load. In fact, the poundage required is quite moderate, with only 75lb for a full-stop at 0·98g. From the standpoints of smoothness, freedom from fade or the effects of water, they are excellent. The handbrake could just hold the car on a 1-in-3 grade, pointing either way, and the car restarted successfully on this slope.

Apart from attending to one rather awkward greasing point, on the propeller shaft's sliding sleeve, once every 5,000 miles when the engine oil is changed, there are no menial tasks to attend to beneath the car. Transmission oil changes are suggested for every 20,000 miles—a good two years' motoring for most people.

Although not conforming to the traditional pattern, the 2000 will not be found wanting by those addicted to the Rover image; more important commercially, it is bound to captivate many who hitherto have been prepared to forgo the finer points of mechanical refinement and coachwork finish, and to search elsewhere for the best dynamic qualities. Many such people have found the answer in a Continental product, and paid the Customs and Excise authorities dearly for the privilege. This reasoning can work both ways, so we predict that the Rover 2000 will make many new friends in Europe and beyond, who hitherto have sought in vain for a British car in this class combining our high standards of finish, trim and equipment with their expectations of road behaviour.

Specification

ENGINE

Cylinders	Four in-line
Bore	85·7mm (3·37in.)
Stroke	85·7mm (3·37in.)
Displacement	1,978 c.c. (120·8 cu. in.)
Valve gear	Single overhead camshaft
Compression ratio	9·0-to-1
Carburettor	Single S.U. H.S.6
Fuel pump	AC mechanical
Oil filter	Full-flow, AC-Delco or Fram
Max. power	90 b.h.p. (net) at 5,000 r.p.m.
Max. torque	113·5 lb. ft. at 2,750 r.p.m.

TRANSMISSION

Clutch	8·5in. single dry plate, diaphragm spring, hydraulic operation
Gearbox	Four speeds, all synchromesh
Overall ratios	Top 3·54, 3rd 4·92, 2nd 7·55, 1st 12·83, Reverse 12·14.
Final drive	Hypoid bevel, 3·54 to 1

CHASSIS

Construction	Skeleton base unit with detachable panels

SUSPENSION

Front	Independent, leading top links, transverse bottom links, coil springs and telescopic dampers, anti-roll bar
Rear	De Dion sliding tube located by Watts linkage and drive shafts, coil springs and telescopic dampers
Steering	Adamant Marles worm and roller, Telaflo hydraulic damper Wheel dia., 17in.

BRAKES

Type	Dunlop discs front and rear, vacuum servo assisted
Dimensions	F. 10·75in. dia. R.10·25in. dia.
Swept area	F. 224 sq. in.; R. 212 sq. in. Total: 436 sq. in. (311 sq. in. per ton laden)

WHEELS

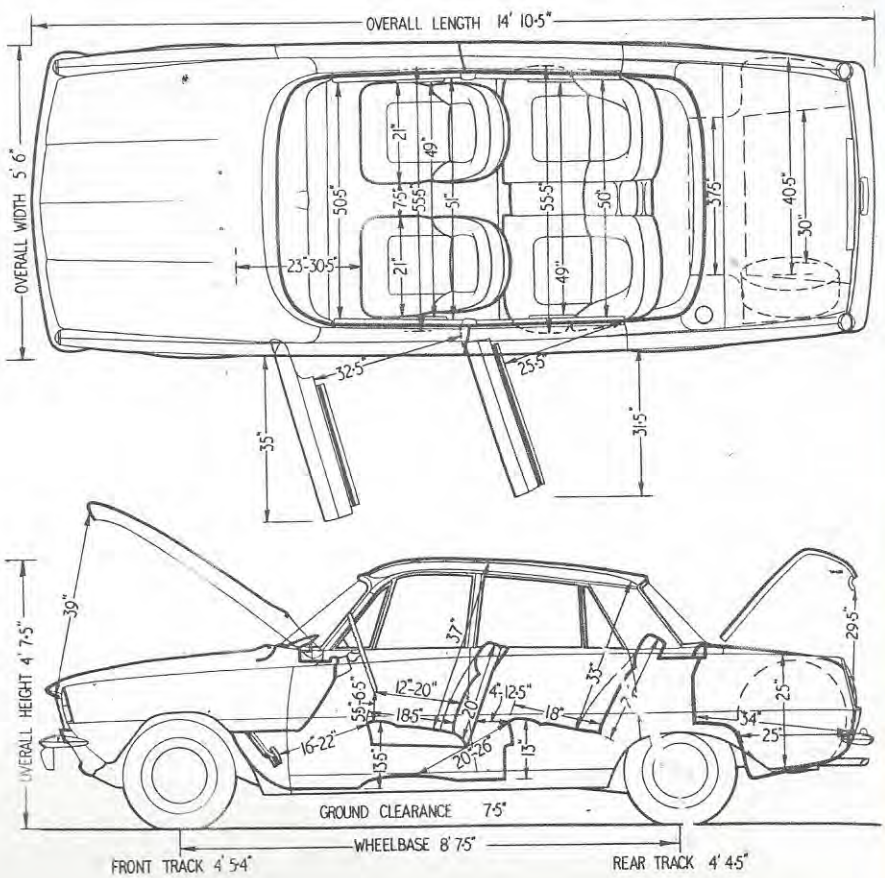
Type	Pressed steel disc, 5 studs, 5in. wide rim
Tyres	165—14in. Pirelli Cintura with tubes

EQUIPMENT

Battery	12-volt 60-amp. hr.
Headlamps	Four-lamp system, total 150-watt mainbeams, 100-watt meeting beams
Reversing lamp	One standard
Electric fuses	3
Screen wipers	Self-parking, variable speed
Screen washer	Standard, Lucas electric
Interior heater	Standard, Smiths fresh air 4·7 kw
Safety belts	Anchorages provided
Interior trim	Leather seat facings, p.v.c. roof lining
Floor covering	Pile carpet
Starting handle	None
Jack	Screw-type
Jacking points	2 each side between wheel arches
Other bodies	None

MAINTENANCE

Fuel tank	12 Imp. gallons (including 1·25 reserve)
Cooling system	17 pints (including heater)
Engine sump	9 pints SAE20W. Change oil every 5,000 miles; Change filter element every 5,000 miles
Gearbox	1·75 pints SAE20W. Change oil every 20,000 miles
Final drive	2·5 pints SAE90EP. Change oil every 20,000 miles
Grease	1 point every 5,000 miles
Tyre pressures	F. 26; R. 28 p.s.i. (normal and fast driving) F. 26; R. 32 p.s.i. (full load)

Scale: 0·3in. to 1ft.

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