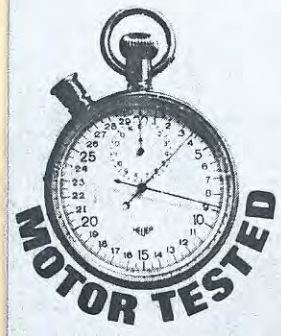
MOTOR ROAD TEST No. 11/66 ● Rover 3-litre Mk. III automatic



Armchair luxury

'. . . quality is ingrained, not superficial.'

ROVERS have been described as among the seven best-made cars in the World. We won't start an argument here about which are the other six qualifiers or exactly what position the Rover holds. Who is to judge such a nebulous contest? But it is certainly true that Rover build cars with a thoroughness and philosophy matched by few other manufacturers. Quality is ingrained, not superficial. Rovers are made to last. We cannot verify this objectively in a 1,500-mile road test but you can look elsewhere for confirmation. Try spotting an early 3-litre from its condition: generally you cannot because most of the Mk. I cars (identified by the anti-draught glass strip above the side windows) look and sound just as healthy as the models now leaving Solihull.

Although the 3-litre is now eight years old, it is still one of the most refined saloons in the world for comfort and quietness; few cars provide better insulation from the traffic commotion outside. Four contoured armchair seats (adapted from the successful Rover 2000 formula) and a separate heating system at the back have raised the standard of comfort on the Mk. III to such a high level that you can forgive the slightly turbulent ride on bad roads—one of the few things that betray the design's age.

The 2000 conquered the traditional Rover image of a car for elderly gentlemen but you could hardly describe the 3-litre, with a price of £2,000, as a young man's car; young tycoons would probably prefer something more lively and responsive, even though the 3-litre will top 100 m.p.h. and handles a lot better than might be expected for such a stately carriage. It is a car for relaxation, not exhilaration. Hence the optional automatic transmission, perhaps the smoothest Borg Warner 35 installation we have yet tried, and power steering that did not get such unanimous praise although it makes the car very easy and light to drive.

PRICE £1,571 10s. plus £328 19s. 2d. purchase tax equals £1,900 9s. 2d. (*including automatic transmission*).

Performance and economy

Most people who drove our test car said that it felt sluggish. For half the price you can certainly buy other saloons with more performance but we suspect that 3-litre owners will be satisfied with what they have. Moreover, the stop-watch shows the acceleration to be better than it feels—the smooth serenity of it all is deceptive. Over-riding automatic drive manually, the acceleration to 50 m.p.h. is equal to that of a Triumph Spitfire, Citroen ID19 or Simca 1500 Estate though it is generally inferior to competitive automatics shown in the comparison charts. The Rover is at its best when cruising quietly and effortlessly at up to 90 m.p.h. on fast main roads or motorways.

After pulling a T-handle choke control under the dashboard, the engine starts instantly from cold: the choke can then be set to give a fast idle until a thermostatically controlled yellow light shines from the facia indicating that normal running temperature has been reached and that the choke should be in. During the warming up period, the engine pulls smoothly from low revs but on full throttle will occasionally miss a beat with a muffled cough.

By *Motor's* standards, the overall petrol consumption of 17.4 m.p.g. is not too bad for such a heavy car; it is 2 m.p.g. better than that of the 3-litre automatic coupé we tested in 1963, though the

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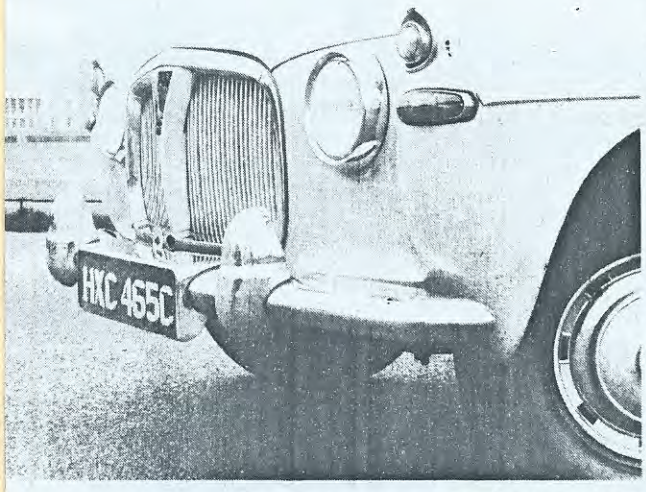
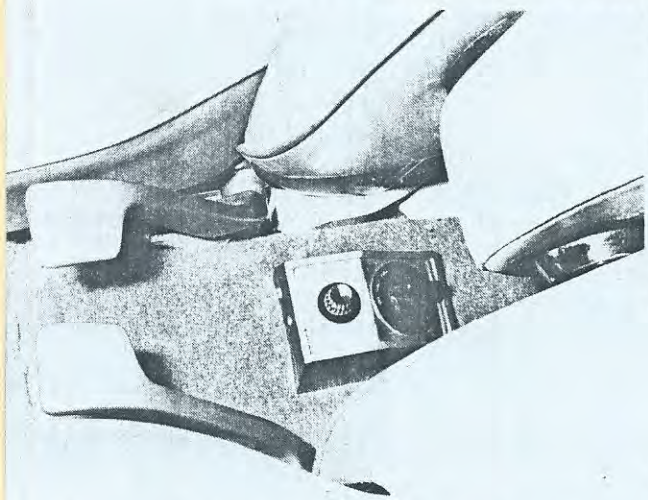
Clubland: deep, contoured armchairs (adjustable for reach, height and rake at the front) provide sumptuous comfort for four people. The central arm-rest at the back—which conceals a trinket box—can be folded away to make room for a fifth person. The passenger's headrest shown here is an extra.

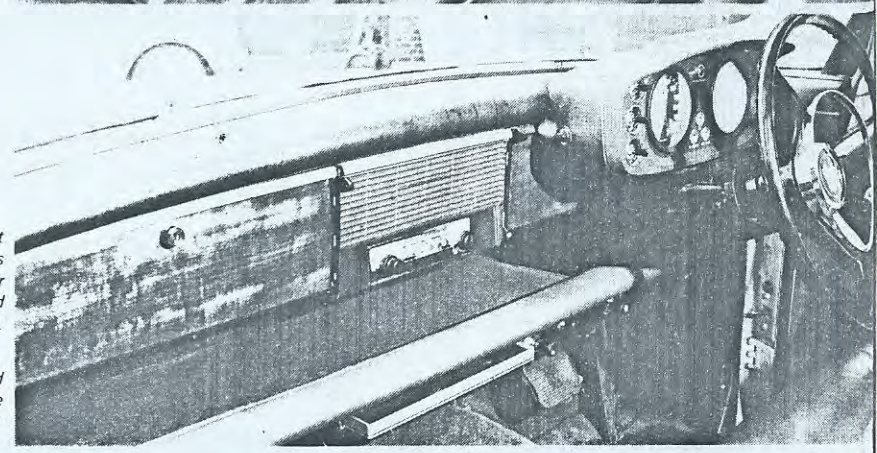


The grille badge is now like the Rover 2000's and the side strip is new. Rare novelty: you can start the 3-litre with a handle.

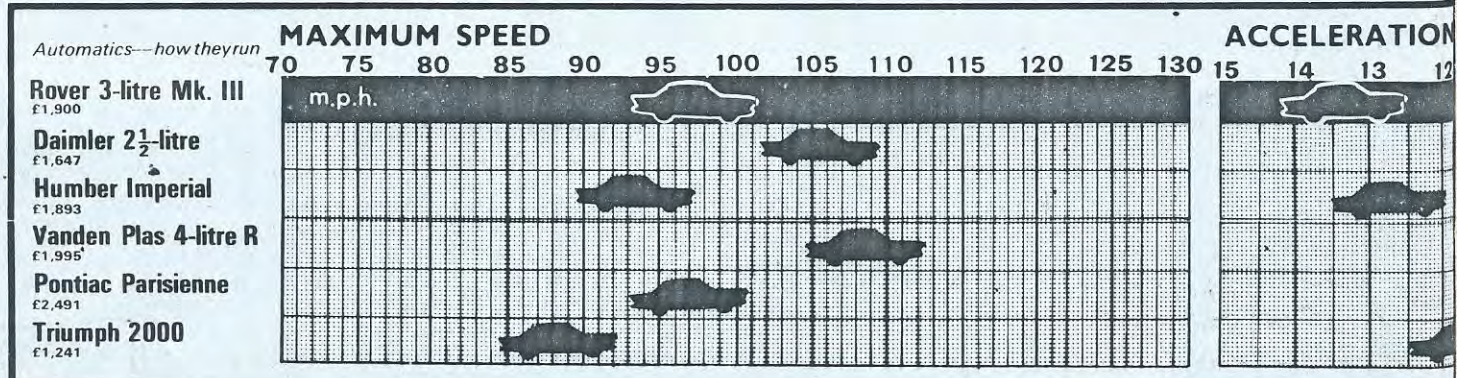


Pulling up on the lever releases the friction lock that holds the squab angle. Very fine adjustment is possible. The panel behind—operated by either front-or back-seat passengers—houses a two-speed rear heater and a radio control.

Parcel accommodation is good but the facia and its controls—even those on the instruments nascelle—are rather distant. Uninterrupted crash padding extends along the top and bottom of the facia.



Automatics—how they run



Performance figures of 127 cars tested by Motor in the past two years appear on page 120.

Rover 3-litre automatic

Continued

figures are not strictly comparable. The saloon's consumption has also benefited from the 70 m.p.h. speed limit: normally, we would have cruised at 90 m.p.h. when the consumption falls to less than 16 m.p.g. compared with 21½ m.p.g. at 70 m.p.h. There is no pinking on 98 octane Premium petrol.

Transmission

On Mk. III automatics, a Borg Warner 35 gearbox replaces the older DG model. Gearbox ratios are slightly lower than before but the 3.54:1 final drive raises the overall gearing so that top gear now gives 22.4 m.p.h. per 1,000 engine r.p.m. compared with the 20.6 m.p.h. of the earlier 119 b.h.p. car. The effect on performance is negligible but there are gains in quietness and economy at high speeds.

Undoubtedly the cushioning effect of a heavy car has helped to smooth the gearchanges but the transmission has also been carefully matched to the engine, even to the extent of having a special torque converter. There is a slight but definite judder when accelerating hard in first and we would prefer a more progressive throttle linkage to give finer starting and manoeuvring control; otherwise, the transmission is free from jerks and surging and even the kick-down operates smoothly. Apart from a curious hissing noise when moving off, it is also very quiet.

The short steering column selector is easy to use for downward lever movements, a little less so for moving up and it is sometimes hard to see the indicator if a steering wheel spoke is in the way. Automatic drive gives full-throttle maximum speeds in the two lower gears of 38 and 69 m.p.h.; by using the selector, these can be raised to 45 and 75 m.p.h. respectively—both of them clearly marked on the speedometer. Far more important than these academic facts is that the transmission, apart from being very

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Performance

Test Data: World copywright reserved; no unauthorized reproduction in whole or in part.

Conditions:

Weather: Cool, damp and breezy.
Temperature 42°–46°F, 10-20 m.p.h. wind.
Barometer 29.50 in. Hg.
Surface: Tarmacadam and concrete.
Fuel: Premium 98 octane (R.M.).

Maximum speeds

	m.p.h.
Mean lap speed banked circuit	101.2
Best one-way ¼-mile	104.5
2nd gear (max. in auto)	69
1st gear (max. in auto)	38
"Maximile" speed: (Timed quarter mile after 1 mile accelerating from rest)	
Mean	93.9
Best	94.9

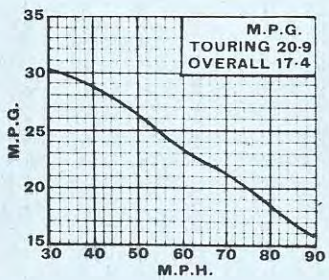
Acceleration times

m.p.h.	auto sec.	manual sec.
0-30	5.6	5.6
0-40	8.4	8.1
0-50	12.5	11.4
0-60	17.0	15.8
0-70	22.4	21.4
0-80	33.0	29.2
0-90	50.2	45.2
Standing quarter mile	20.8	

m.p.h.	kick down sec.
20-40	5.0
30-50	6.9
40-60	8.6
50-70	9.9
60-80	16.0
70-90	27.8

Fuel consumption

Touring (consumption midway between 30 m.p.h. and maximum less 5% allowance for acceleration)	20.9 m.p.g.
Overall	17.4 m.p.g. = 16.2 litres/100 km.
Total test distance	1,300 miles
Tank capacity (maker's figure)	14 gal.



Weight

Kerb weight (unladen with fuel for approximately 50 miles)	33.7 cwt.
Front/rear distribution	53/47
Weight laden as tested	37.4 cwt.

Steering

Turning circle between kerbs:	ft.
Left	37
Right	36.5
Turns of steering wheel from lock to lock	3.2
Steering wheel deflection for 50 ft. diameter circle	1.3 turns

Brakes

Pedal pressure, deceleration and equivalent stopping distance from 30 m.p.h.

lb.	g	ft.
25	0.33	91
50	0.70	43
75	0.85	85
100	0.98	30½
Handbrake	0.42	71

Fade test

20 stops at ½g deceleration at 1 min. intervals from a speed midway between 30 m.p.h. and maximum speed (= 66 m.p.h.)

	lb.
Pedal force at beginning	45
Pedal force at 10th stop	45
Pedal force at 20th stop	45

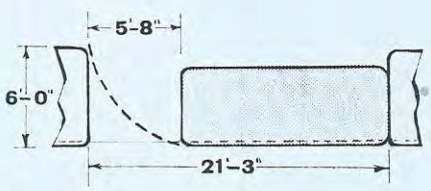
Speedometer

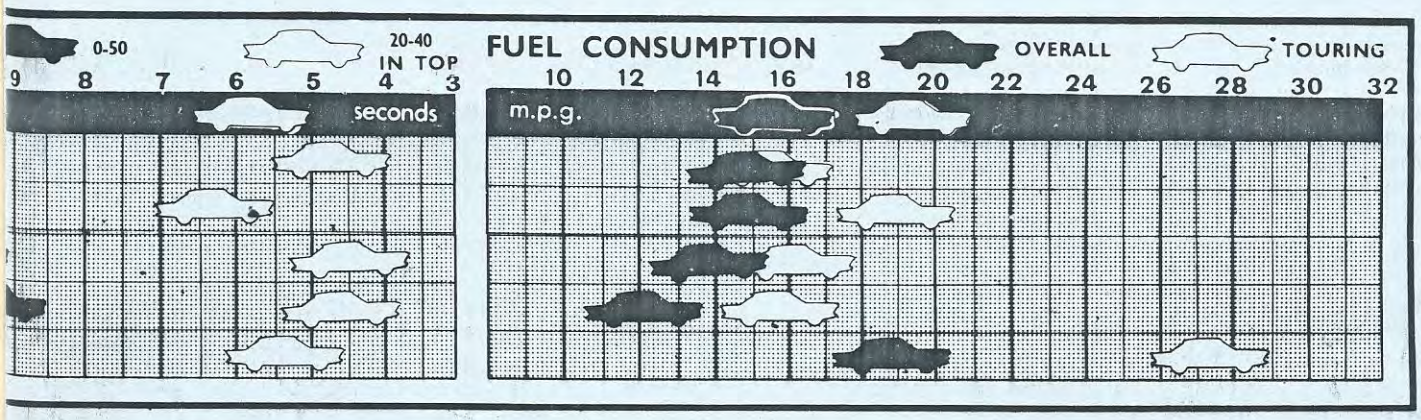
Indicated	10	20	30	40	50	60	70	80	90	100
True	12½	19½	29	38	48	58	67	76½	86½	96

Distance recorder 2% slow

Parkability

Gap needed to clear a 6 ft. wide obstruction parked in front.





Rover 3-litre automatic

Continued

The bright-metal strip running down the side distinguishes Mk. III versions of the 3-litre. Pronounced "tuck-in" at the bottom of the body prevents scuffing against high kerbs.

smooth, is apparently foolproof: it is not confused by sudden open/shut throttle movements and never leaps uncertainly from one gear to another. Apart from the occasional use of intermediate hold for hill-climbing or slow, twisty roads, you tend to retain the lever at the fully automatic setting and leave the rest to science.

Handling and brakes

This big, unsporting car can be hurled through corners with great whooshing noises coming from the tyres but little fear of unsticking them unless you try a great deal harder than was ever intended. On wet or dry roads, consistent understeer dictates big, indelicate steering wheel movements for fast cornering and, predictably, it is the front wheels that will ultimately break away first. At this improbable stage, tyre scrub is so acute that the car slows down quickly when you lift off and adhesion is restored. We did not have a chance to drive on snow or ice but on a particularly greasy country road—splattered with mud from a tractor convoy—the Rover changed its character and slid the tail first with little provocation from the throttle. Again, a minor slide is virtually self-correcting when you lift off.

The Hydrosteer power assistance fitted as standard to all 3-litre Rovers takes most of the effort out of steering without displaying that featherweight, unconnected feel so typical of most American cars. To reduce rapid wheel turning on sharp, slow corners the variable ratio linkage gets progressively quicker as you wind on lock: relatively large movements are needed for gentle bends, which gives the impression of little or no road feel around the straight-ahead position. Probably because of this, some of our drivers did not like the steering very much until they had done a considerable mileage.

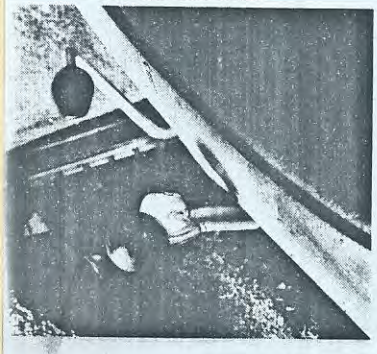
As the figures show, the servo-assisted disc/drum brakes worked impressively well at only moderate pedal pressures, though the brake pedal on our test car had a rather long, spongy travel and did not feel very reassuring at first. The handbrake provides quite a good emergency stop but needed a pull beyond the strength of most women to hold the car on a 1 in 3 hill.

Comfort and controls

Comfort depends on a great many things—ride, seats, quietness, ventilation, heating, fittings. . . . In all these respects except the ride, the 3-litre sets very high standards. Both front and back seats are very deep, fairly firm and expertly contoured to support the thighs, spine and shoulders in the right places. You would not fit these big, heavy seats in a competition car—side support is not *that* good—but they would make splendid armchairs in anyone's living room. Other manufacturers must soon copy Rover's lead of providing infinitely fine squab movements with a friction lock operated simply by releasing a handy lever; the usual notched adjusters seldom provide exactly the right angle. You can raise yourself above other motorists by winding on a handle at the front of the seat and there is the usual wide adjustment for reach so the 3-litre caters for people of all shapes and sizes. Even the arm-rests can be adjusted. Although the back seat has been contoured for only two people, a third can sit less comfortably in the centre between them; because he sits further forward, there is no battle for shoulder space. Rear-seat legroom has been increased by a useful 2½ inches and is now sufficient to be able to stretch and relax in great comfort. The suspension is harder than currently fashionable for a luxury saloon and on bad roads it can be heard and felt beating a relatively smooth passage for the heavy body. The 2000 does the job very much better and gives an insight of what to expect from the next generation of big Rovers.

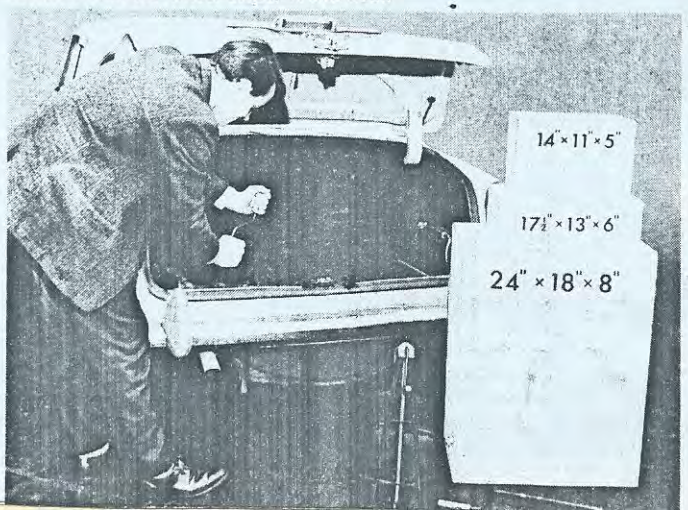
The 3-litre makes very little noise. Only when accelerating hard in the lower gears are you really conscious of the muffled hum from the engine: at 70 m.p.h. it is scarcely audible and wind and tyre roar have also been well isolated. Two distant heater controls working vertically in the centre of the facia regulate the temperature and distribution of incoming air which seems to seep through the car—taking some time to do it after a cold start—without causing any uncomfortable blasts or hot spots. There is a completely separate recirculatory heater at the back with a two-speed fan control between the front seats on the transmission tunnel. Outlets beneath the back seat keep your feet comfortably warm without making the air at head height too stuffy. In addition to the front

These two handy adjusters move the seat up or down (the handle foreground) and back and forth.

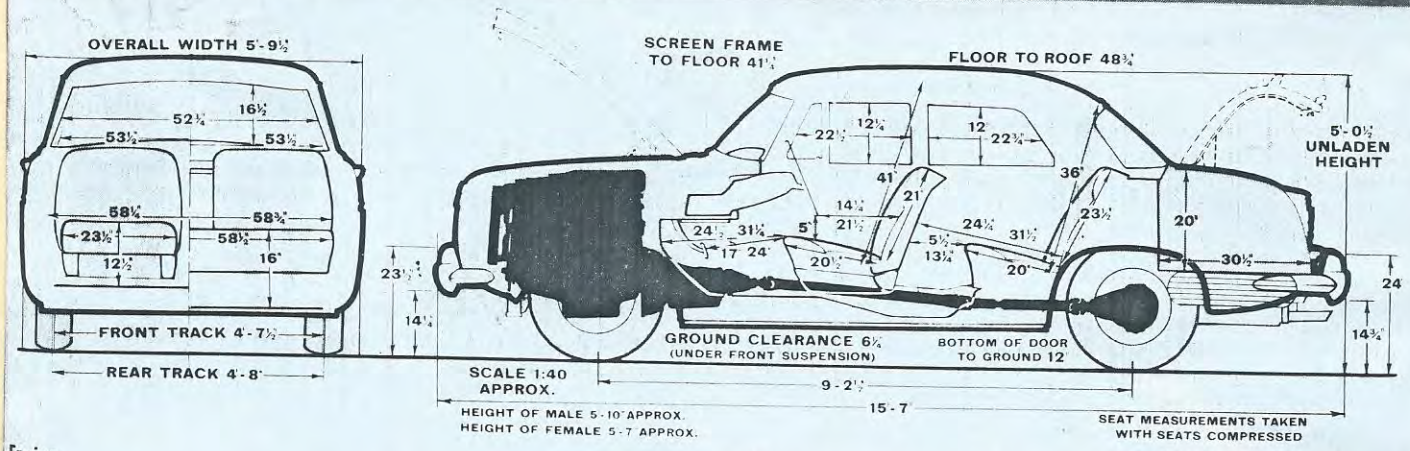


Sensible novelty: the door arm-rests are adjustable for height and there is a wide pocket for maps and books.

The battery on the right steals a little boot space but there is still room for 9.8 cu. ft. of our test boxes. The spare wheel has its own carrier, lowered with the wheel brace, underneath.



Specification



Engine

Cylinders	6
Bore and stroke	77.8 mm. x 105 mm.
Cubic capacity	2,995 c.c.
Valves	overhead inlet, side exhaust
Compression ratio	8.75 : 1
Carburetter	S.U. HD8 2in. horizontal
Fuel pump	S.U. electric
Oil filter	AC Delco full flow
Max. power (net)	121 b.h.p. at 4,800 r.p.m.
Max. torque (net)	160 lb. ft. at 2,650 r.p.m.

Transmission

Gearbox	Borg Warner 35 automatic with fluid torque converter driving a 3-speed planetary gear train
Top gear	1.00 : 1
2nd gear	1.45 : 1
1st gear	2.39 : 1
Reverse	2.09 : 1
Final drive	Spiral bevel 3.54 : 1
M.p.h. at 1,000 r.p.m. in:—	
Top gear	22.4
2nd gear	15.2
1st gear	9.4

Chassis

Construction	Unitary steel body attached to a welded steel chassis unit at the front

Brakes

Type	Girling vacuum-servo assisted
Dimensions	10.75 in. front discs; 11 in. rear drums, 2.25 in. wide
Friction areas	Front: 20.35 sq. ins. of lining operating on 260 sq. ins. of disc drum. Rear: 106.35 sq. ins. of lining operating on 154.4 sq. ins. of disc/drum

Suspension and steering

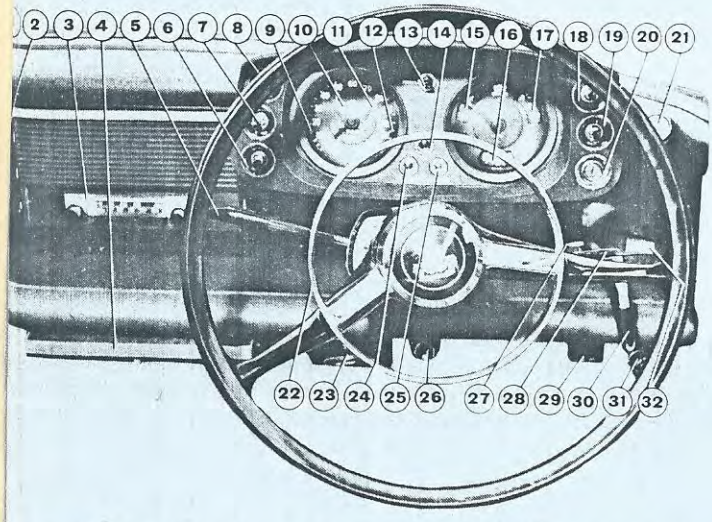
Front	Independent by wishbones and laminated torsion bars, telescopic dampers and an anti-roll bar.
Rear	Live rear axle with semi-elliptic leaf springs and telescopic dampers.
Shock absorbers: Front and rear	Woodromatic telescopic
Steering gear	"Hydrosteer" power-assisted worm and peg.
Tyres	6.70 x 15 (Dunlop Roadspeed tubeless or Avon Turbospeed Mr. IV tubed)
Rim size	5K x 15 in.

Coachwork and equipment

Starting handle	Yes
Jack	Screw pillar
Jacking points	2 each side under body sills
Battery	12 volt, 57 amp. hrs. capacity
Number of electrical fuses	11
Indicators	Self cancelling flashers
Screen wipers	Variable speed self parking electric
Screen washers	Press button electric
Sun visors	2
Locks: With ignition key	Front doors and petrol filler cap
With other keys	Boot and facia glove box
Interior heater	Fresh air heater/demister in front, separate recirculatory heater in rear compartment
Major extras on test car	Automatic transmission, Heated back window, laminated windscreen, passenger head rest
Upholstery	Leather
Floor covering	Carpet with felt underlay
Alternative body styles	Coupé

Maintenance

Sump	10 pints S.A.E. 20
Gearbox	15 pints ATF
Rear axle	3 pints 90 EP
Steering gear	ATF
Cooling system	26 pints (drain taps 2)
Chassis lubrication	Every 6,000 miles to 1 point
Minimum service interval	3,000 miles
Ignition timing	3° b.t.d.c.
Contact breaker gap	0.014-0.016 in.
Sparking plug gap	0.028-0.033 in.
Sparking plug type	Champion N5
Tappet clearances (hot)	Inlet 0.006 in.: Exhaust 0.010 in.
Valve timing: inlet opens	13° b.t.d.c.
inlet closes	45° a.b.d.c.
exhaust opens	48° b.b.d.c.
exhaust closes	16° a.t.d.c.
Front wheel toe-in	Zero + 1/16 in.
Camber angle	1.5°
Castor angle	0.25° positive
Kingpin inclination	4.5°
Tyre pressures	26 p.s.i. front and rear



1, glove box. 2, temperature control. 3, radio. 4, picnic tray concealing tool kit. 5, gear selector. 6, wipers. 7, wiper rheostat. 8, panel lights. 9, speedometer. 10, trip mileage recorder. 11. total mileage recorder. 12, main beam tell tale. 13, petrol reserve. 14, ignition light. 15, water temperature. 16, petrol gauge. 17, ammeter. 18, lights. 19, heater fan speed. 20, ignition/starter. 21, air vent. 22, horn. 23, choke. 24, oil pressure low. 25, cold start tell-tale. 26, rear screen demister. 27, headlights. 28, direction indicator and headlight flasher. 29, bonnet release. 30, handbrake. 31, cold air vent. 32, handbrake warning light.

quarter lights (which disturb the quietness when open) the inside can be ventilated with small butterfly-valve vents, one each end of the facia, or bigger inlets under the scuttle that are controlled by push-pull knobs. Our test car also had a heated back window which quickly dispersed any misting.

The windows are shallower than normal though the high waistline is not a handicap when the seats are adjustable for height. All-round visibility is reasonable but you do not get quite such a panoramic or skywards view as in some modern saloons.

Fittings and furniture

Time alone will measure the quality and workmanship behind the 3-litre's engineering; it takes only a few minutes to see and assess the quality of the fittings and furniture inside. The decor is traditional British, which is traditional Rover: leather upholstery, African Cherry wood cappings (a nice change from walnut), thick carpets, and black fittings and controls. It is all very tasteful, unembellished and expensive. We have never particularly liked the 3-litre's instruments nacelle. The clear, round, white-on-black instruments are easy to see and read. But the minor toggle switches, all working in a horizontal plane, cannot be operated without taking a hand off the wheel and although the positions are logical it takes some time to memorize them all. The windscreen washer, tucked away on the side of the nacelle, the two heater controls in the centre and several

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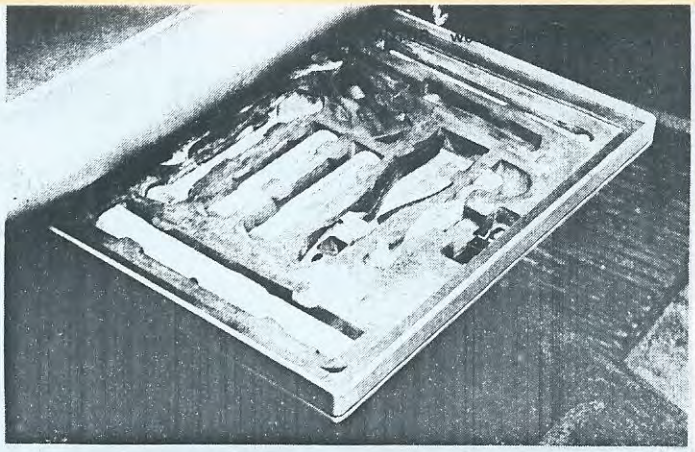
Rover 3-litre automatic

Continued

under-scuttle knobs are all particularly awkward to reach if you are strapped in.

There are a number of unusual luxury fittings. The electric clock, which used to be in the centre of the facia where parallax made it difficult to read, has been moved to the passenger's end of the curved wrap-round facia. This leaves a safer unobstructed padded roll right round the top of the scuttle. Apart from individual reading lights for each passenger, there is a light in the front passenger's headrest (an option) which can be adjusted to a position just above your lap in the back seat. There are stow-away central picnic trays —the back one with cut-outs to hold glasses, the front one concealing a splendid tool-set embedded in a foam rubber cradle. Little touches like this will delight the connoisseur. The deep full-width parcel shelf in front will swallow more oddments than that of most cars but it is well forward of the seats and not within easy reach. However, it does emphasize the spacious feeling inside the car. There is also a lockable facia glove box and the back-seat arm-rest conceals a "trinket" compartment. The battery steals a useful corner in the boot, but not the spare wheel which has its own cradle underneath, leaving room for plenty of luggage.

Full-width padding on the top and bottom of the facia provides a soft landing for passengers thrown forward in a crash or sudden braking but there are a few hard projections in between. Our test cars had lap-and-diagonal seat belts which were easy to clip together and tension but, as so often happens, they tended to get trapped beneath the front seats: with a distant facia and controls, inertia lock safety belts which provide more freedom of movement would be better.



A slide-out picnic tray beneath the facia conceals this nest of tools.

Servicing and accessibility

Very few new-car owners are going to maintain a 3-litre Rover themselves; for those who do, the servicing schedule is summarized below. Service intervals have been extended to once every 5,000 miles so most people will only lose their car to the garage two or three times a year. There is no fixed price for each service and the handbook says "where a high standard of work is looked for the higher price of labour charges is inevitable". So competent servicing is not likely to be cheap.

Although the bonnet is pretty well filled with machinery, those ancillaries that are likely to involve the owner are mostly accessible —the coil, windscreen washer bottle, filler caps for the radiator, oil, powersteering and hydraulic reservoir, two dipsticks, distributor and starter solenoid.

Maintenance summary

A **Engine.** Every 5,000 miles: change oil, renew external filter, check slow running, clean spark plugs, check distributor points, water level. Every 10,000 miles: clean and re-oil engine breather filter, check oil in carb. damper, renew spark plugs, clean and oil distributor, check tappets, fan belt. Every 20,000 miles: replace air cleaner, clean sediment bowl.

B **Gearbox.** Every 5,000 miles: check fluid level. Every 10,000 miles: drain and re-fill.

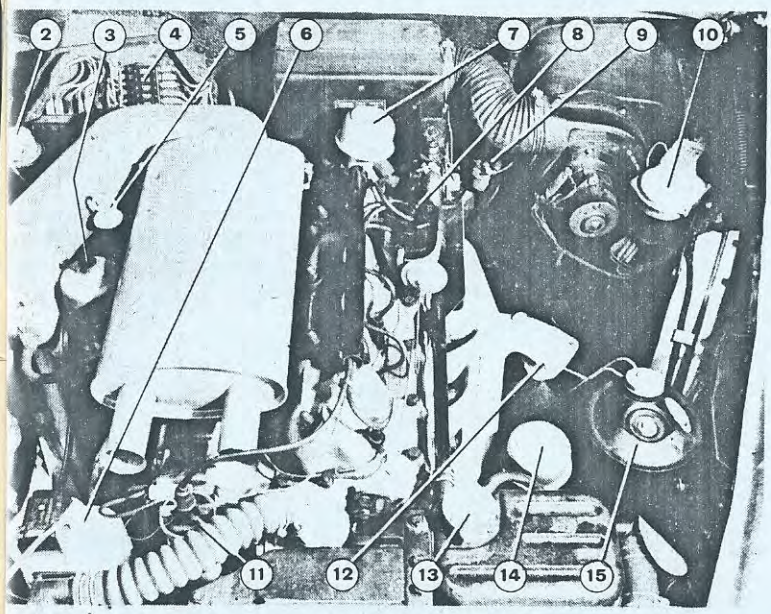
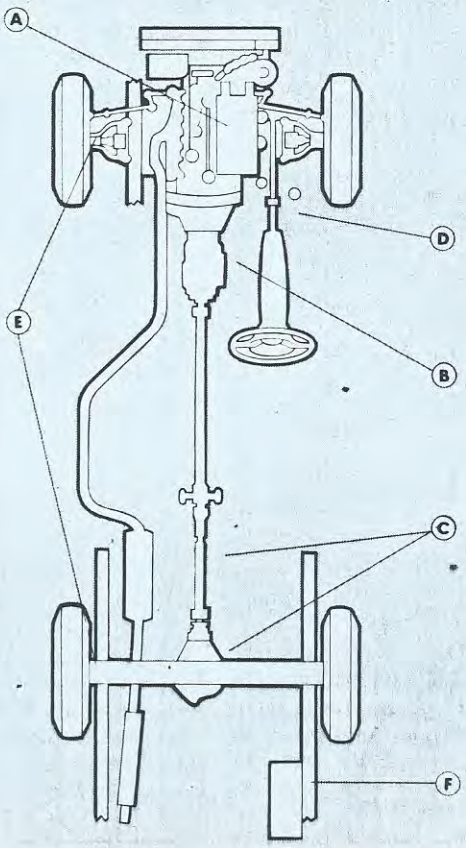
C **Back axle and prop shaft.** Every 5,000 miles: check oil level, lubricate prop shaft sliding joint. Every 10,000 miles: drain and re-fill back axle.

D **Power steering.** Every 5,000 miles: check fluid level. Every 10,000 miles: check rubber boots on steering joints.

E **Brakes and wheels.** Every 5,000 miles: check brake reservoir level, level safety switch, thickness of front pads (min. 3 mm), adjust rear wheel brakes, change and wash road wheels, check tyre pressures. Every 10,000 miles: check front hubs for leaks. Every 20,000 miles: check front wheel alignment, renew air filter element on servo. Every 40,000 miles: renew all rubber seals in brake system.

F **Electrical.** Every 5,000 miles: check battery acid level. Every 10,000 miles: clean, grease and tighten terminals, check headlamps setting.

Miscellaneous; check water level in screen washer periodically, oil linkages, doors, etc., every 10,000 miles.



1, petrol filter. 2, hydraulic reservoir. 3, SU carburetter. 4, fuses. 5, automatic gearbox oil dipstick. 6, screen washer bottle. 7, oil filler. 8, distributor. 9, starter solenoid. 10, windscreen wiper motor. 11, coil. 12, engine oil dipstick. 13, radiator filler cap. 14, oil filler cap. 15, power steering reservoir.