

John Bentley **TESTS AND COMPARES**

The British contingent of the foreign economy-car invasion, these three small sedans combine lively performance with surprising comfort, says SPEED AGE's test pilot.

By **JOHN BENTLEY**

TO the determined French, Swedish, Italian and German invasion of the small car domain currently ruled by Volkswagen, must be added a British trio of considerable merit. Two models of this threesome—the Austin A-35 and Morris Minor 1000—are BMC (British Motors Corporation) products; the third—the Hillman Minx—is the smallest horse of the Rootes Group stable. All three cars have been on the market in one guise or another for many years; all three have found a ready market the world over among buyers sensibly aware that you don't need 250 hp to convey you to the local drug store for a pack of cigarettes.

The Morris Minor, completely redesigned after the War and re-introduced in 1948, originally had a side-valve engine which was replaced in 1952 by a BMC pushrod overhead

valve power unit of 803 cc (49 cu.in.), shared also by the Austin A-30. Last fall, when the 1957 models were announced, both these cars were re-equipped with the BMC Series II engine of just under 58 cu.in. The Morris Minor became known as the "1000" and the Austin as the A-35. In a sense, therefore, these two small sedans have grown up together.

Similarly, the Hillman Minx has gained stature, power and performance through the years, acquiring many refinements along the way. Originally introduced in 1931 as a four-passenger family sedan, the Minx then had a side-valve engine of 1,182 cc (72.1 cu. in.), compared with today's power unit of almost 85 cu.in. which develops about 20 hp more. The 1957 version of the Minx now shares many components with two other current products of the Rootes Group—the Sunbeam



AUSTIN A-35

HILLMAN MINX

MORRIS 1000

Rapier and Singer Gazelle, both of them costlier cars. In fact, the engines of the Minx and the Rapier are of identical displacement and basic design, but the latter uses a different camshaft and develops 16 bhp more at a high rev limit of 5,400 rpm.

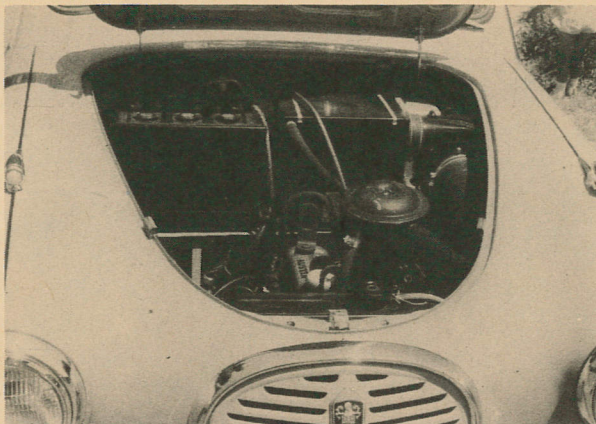
These details are not intended merely as historical filler; they are important to the prospective and present owners of any of the three cars under test because interchangeable components mean a greater availability of spares wherever these cars are sold.

So here we are, once again, with a comparison test involving this time three popular imports in the small sedan bracket, all of them offering excellent value and as much performance as one could expect from a four-cylinder engine of limited displacement. The question is, to what extent and on what basis can we compare them

COMPARATIVE TABLE

SPECIFICATIONS	AUSTIN A-35	MORRIS MINOR 1000	HILLMAN MINX
ENGINE & CHASSIS			
CYLINDERS	4	4	4
BORE	2.48 IN.	2.48 IN.	3.00 IN.
STROKE	3.00 IN.	3.00 IN.	3.00 IN.
DISPLACEMENT	57.82 IN.	57.82 IN.	84.82 IN.
COMPRESSION RATIO	8.3:1	8.3:1	8:1
MAXIMUM OUTPUT	34 BHP @ 4,750 RPM	34 BHP @ 4,750 RPM	51 BHP @ 4,600 RPM
VALVES	OVERHEAD PUSHROD	OVERHEAD PUSHROD	OVERHEAD PUSHROD
CARBURETION	SINGLE ZENITH	SINGLE SU	SINGLE ZENITH
	DOWNDRAFT	AUTOMATIC	DOWNDRAFT
	26-VME	SIDEDRAFT	30-VI
TRANSMISSION	FOUR-SPEED (SYNCHRO 2, 3, 4)	FOUR-SPEED (SYNCHRO 2, 3, 4)	FOUR-SPEED (SYNCHRO 2, 3, 4)
OVERALL RATIOS			
LOW	16.51	16.47	17.04
SECOND	10.80	10.80	11.80
THIRD	6.41	6.41	7.12
FOURTH	4.55	4.55	4.77
REAR AXLE RATIO	4.55	4.55	4.77
MPH PER 1,000 RPM (HIGH)	14.26	15.20	15.32
TURNING DIAMETER	33 FT.	33 FT. 1 IN.	34 FT. 3 IN.
STEERING	CAM & GEAR	RACK & PINION	WORM & NUT
STEERING WHEEL TURNS (LOCK TO LOCK)	2½	2½	2½
TIRE SIZE	520 x 13	500 x 14	560 x 15
BRAKE LINING AREA	67.2 SQ. IN.	63.8 SQ. IN.	92 SQ. IN.
WEIGHT (CURB)	1544 LBS.	1712 LBS.	2200 LBS.
GAS TANK CAPACITY (US GALLONS)	6.9	6	8.4
DIMENSIONS			
WHEELBASE	79½ IN.	86 IN.	96 IN.
TREAD (FRONT)	45¼ IN.	50½ IN.	49 IN.
TREAD (REAR)	44¼ IN.	50½ IN.	48½ IN.
OVERALL LENGTH	136¾ IN.	148 IN.	160½ IN.
WIDTH	55½ IN.	61 IN.	60¾ IN.
HEIGHT	59¼ IN.	60 IN.	59½ IN.
GROUND CLEARANCE	6½ IN.	6¾ IN.	7 IN.
PRICE	\$1,555	\$1,715	\$1,849
PERFORMANCE FACTORS			
ACCELERATION THRU GEARS (IN SECONDS)			
0 — 30 MPH	6.1	6.6	6.7
0 — 40 MPH	12.0	11.2	10.5
0 — 50 MPH	19.5	16.9	15.0
0 — 60 MPH	29.3	27.6	25.8
30 — 50 MPH	12.4 (3 & 4)	10.7 (3 & 4)	10.6 (3)
MAXIMUM SPEED (MPH)	70	70	80
STANDING QUARTER MILE (IN SECONDS)	23.2	23.9	23.1
MAXIMUM TORQUE (LBS/FT @ RPM)	50 @ 2,000	48.6 @ 3,000	69.75 @ 2,400
BHP PER CU. IN.58	.58	.50
LBS PER BHP	45.41	50.35	43.13
PISTON SPEED (FT. PER MIN. @ PEAK RPM)	1,963	1,963	2,300
GAS CONSUMPTION (MPG INCLUDING HEAVY TRAFFIC AND ALL TESTS)	36.9	35.5	30.2

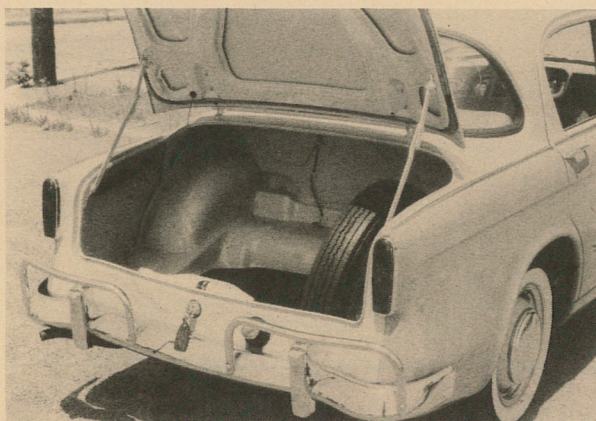
NOTES: Weather dry, clear and warm. No wind.
All speeds indicated and uncorrected.
All times, mean of four runs.



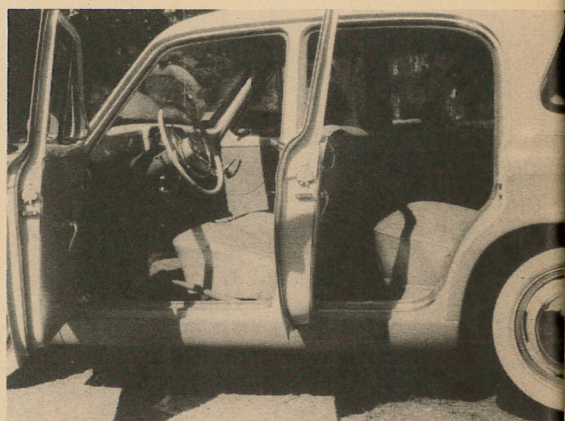
Austin A-35 version of standard BMC engine is set low in frame. Battery and heater sit high in back of mill.



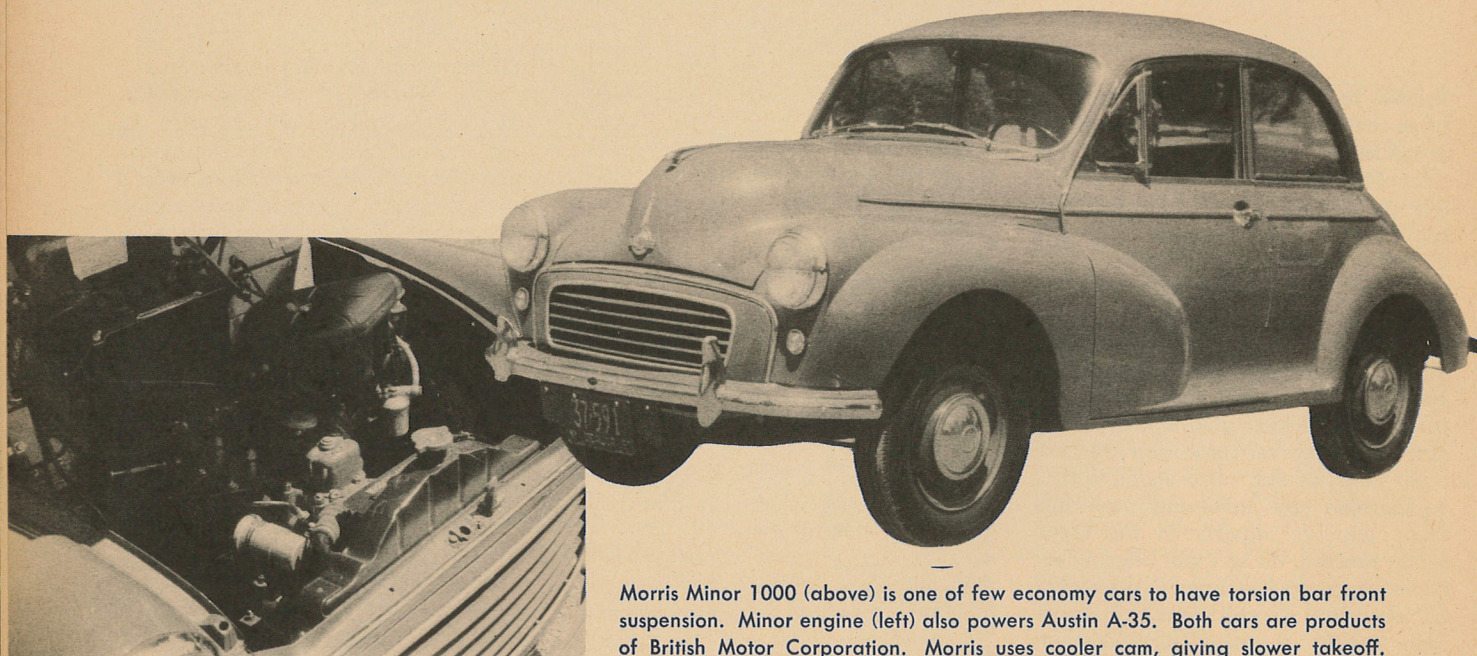
All three cars offer ample trunk space. Austin A-35 and Morris 1000 each have eight cubic feet.



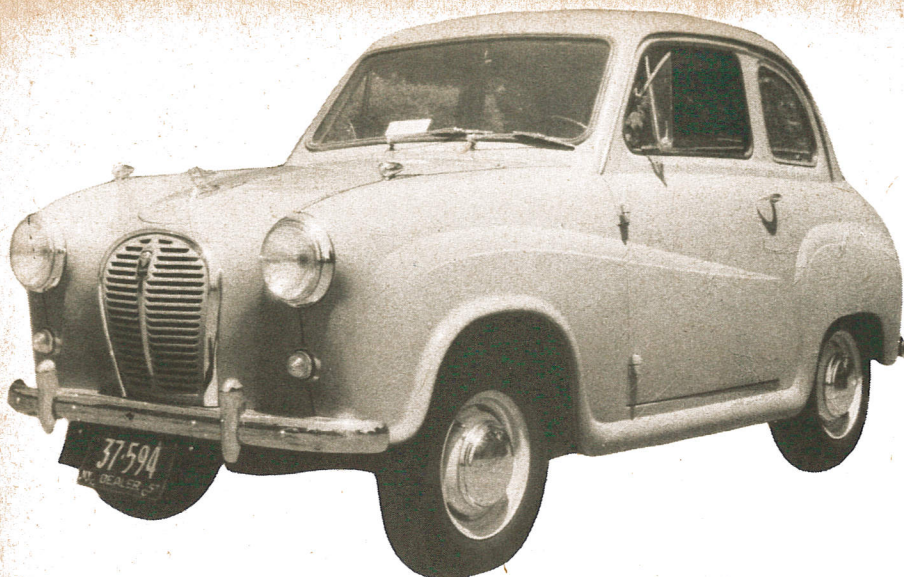
Hillman has largest trunk of three cars tested. Sturdy bumpers were designed to fend off large American cars.



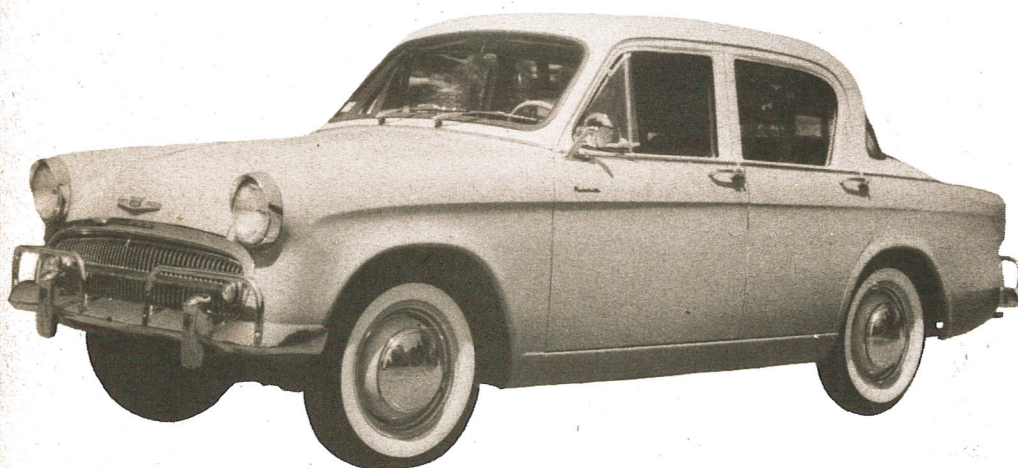
Hillman Minx interior is roomy, well-appointed. Seats are covered in pleated simulated leather.



Morris Minor 1000 (above) is one of few economy cars to have torsion bar front suspension. Minor engine (left) also powers Austin A-35. Both cars are products of British Motor Corporation. Morris uses cooler cam, giving slower takeoff.



Austin A-35 is lowest-priced model of an extensive line of cars which ranges up to Austin-Healey sports car and Princess sedan. Styling is traditionally Austin.



Hillman Minx body lines show strong American influence. Bentley rates it one of the smoothest, quietest-riding small sedans he has tested.

to each other, and how do they stack up against, for example, the Volkswagen, which has dominated the small sedan field for so long?

The Austin, Morris and Hillman have several points of direct comparison, apart from their concerted attack on the Volkswagen market. For instance, the A-35 and the "1000" use the same engine and gearbox; the Austin and the Hillman have the same suspension—independent in front by coil springs and half-elliptical rear; all three cars feature overhead-valve engines; all three have a largely comparable performance up to 60 mph, and in the economy department will top 30 mpg. It is true that the Hillman Minx packs 27% more cubic inches and 17% more bhp than the other two, but against this it weighs 650 lbs more than the Austin and nearly 500 lbs more than the Morris.

Price-wise, the \$160 differential between the Austin and Morris is not too important, but with the Hillman price tag nearly \$300 higher than that of the A-35, this is a factor to consider. However, as will be seen, for that additional \$300 the Hillman offers a commensurate amount of extra everything, including comfort, ease of performance, general finish and roominess.

Perhaps the fairest way to tackle the problem is first to compare the Austin and Morris, and then see how they stack up, relatively, against the Hillman.

In our tests, each car was driven at least 200 miles under conditions precisely duplicating daily use. That is, in light, medium and very dense traffic (Manhattan at quitting time on a Friday afternoon); over main highways up to maximum speed, and through winding secondary roads, including my

preferred local stretch of abominable surface, guaranteed to seek out the rattles and squeaks on *any* car. In addition, with the Editor manning the stopwatches, we put all three sedans through the mill in the acceleration department. Here is what we came up with:

Performance: Up to 35 mph, the A-35 is definitely livelier and quicker off the mark than the Minor "1000" (see Comparative Table). At 40 mph the Morris shows a slight gain in acceleration which is maintained in about the same proportion up to 60. Since the engine, displacement, power output, transmission and final drive ratio are identical in both, this is slightly puzzling until we check the weight of the A-35, which is 168 lbs less than the Morris, and also the slightly smaller overall tire and wheel diameter. The
(Continued on page 64)

AUSTIN-MORRIS-HILLMAN

(Continued from page 28)

Austin is about one mph slower per 1,000 rpm in high gear than the Morris. However, even that is not the whole explanation. The Austin (see Table) develops peak torque at only 2,000 rpm or just under 30 mph, whereas the Morris torque peak is not reached until 3,000 rpm and is also fractionally less than that of the Austin. The probable explanation, here, is the use of a different camshaft.

The happy cruising speed on both cars is about 55 mph, but 60 can be held readily enough if required. Although the speedometer was pushed up to an indicated 70 mph, neither car sounded as though it were enjoying the experience. For all practical purposes, therefore, an indicated 60 to 65 mph is the useful maximum.

From 30 to 50 mph, dropping down into third and then upshifting into fourth at about 45 mph, the higher maximum torque range of the Morris gives it nearly a two-second edge over the Austin. Since this is the average overtaking speed in moderate traffic, the point is worth noting. Both cars will do 50 mph in third, but this is pushing the revs too high and does not constitute normal driving. Both the Austin and Morris showed a nominal mileage, suggesting the engines were not fully limbered-up; the Hillman alone had clocked enough miles (about 1,600) to offer its true potential.

The Minx, compared with the other two cars, is no jet-job. In fact it proved a fraction slower than the others below 30 mph, despite its lower axle ratio which is offset by the larger tire and wheel diameter. But the obvious point about the Hillman is that it will do all that the other two cars can do, not only a little faster but very much more easily. Nowhere during the acceleration tests did the engine appear to be straining, and since the car will reach 60 mph in third, it proved unnecessary to upshift into high gear during the 30-to-80 mph acceleration test. In this bracket, there is little to choose between the Morris and Hillman, except that the latter makes lighter work of the job. This feeling is evident throughout the performance range. The Hillman will reach 70 as easily as the others get to 60, and still didn't sound unhappy at 80.

As to how these three compare on performance with the Volkswagen, the answer is simple enough: there is little to choose between the Morris, A-35 Austin and VW—acceleration and maximum speed of all three being almost identical. The Hillman, on the other hand, compares most closely with the

supercharged Volkswagen. Both will hit 40 in about 10.5 seconds; 50 mph in 15 seconds. The blown VW is three seconds faster getting to 60 mph, but the times for the standing quarter mile are within a half-second of each other (VW, 22.4 secs).

Comfort: The Morris, with 48 inches of rear seat width, scores over the Austin which is only 35 in. from armrest to armrest. Rear seat depth is identical in both—17 inches. On the other hand, the front seats of the Austin are 19 inches wide, compared with 17 for the Morris. With the driving seat in normal position, both cars allow nine inches of knee room for the rear passengers; both also offer 17 inches of driver legroom from front seat edge to pedals. In both the Austin and Morris there is plenty of room to park the left foot when not operating the clutch.

Since riding qualities, convenience and noise level may also be considered under the heading of comfort, honors are about divided between the Austin and Morris. Because of its short wheelbase, the A-35 tends to pitch more than the "1000"; also, on a rough surface, or in the event of a panic stop, the torsion bar front suspension of the Morris is definitely superior. In the Austin, the door windows slide up and down instead of cranking—a feature hardly ever encountered nowadays; but against this, the Austin's rear windows can be swivelled outward for added ventilation, whereas those of the Morris (although considerably larger), do not open. The Austin is provided with a courtesy light which operates when the doors are opened; the Morris does not have this refinement. Both cars feature large parcel shelves under the dash, occupying the width of the body, but in addition the Morris has two glove boxes whereas no such facility is provided in the Austin. Both cars feature grouped instrument panels in the center of the dash, with lights for the oil pressure and charge indicators, a fuel gauge dial and a speedometer.

In the noise department, the gearbox common to the two BMC cars has an appreciable whine on the indirect gears which is absent from the Hillman transmission.

Finally, the heating and defrosting systems of the Austin and Morris are very adequate, while trunk space is as much as could be expected. The Minor provides eight cubic feet of luggage space, with the spare wheel stowed in a separate slot underneath; the A-35, about the same after deducting the space occupied by the spare.

The Hillman, if only by virtue of its longer wheelbase and additional weight, scores in many of the foregoing points over the other two. Maximum

rear seat width is one inch more than in the Morris; seat depth is the same, but the rear passengers have 10 inches of knee room and recline more comfortably because the seat is higher, relative to the floor line. Three average-sized people can occupy the rear seat of the Hillman without feeling like sardines—a somewhat more difficult feat in the Morris and an impossible one in the Austin, which, after all, does not claim to be a five-passenger car.

The Minx' front legroom from seat edge to pedal is slightly less than in the other two cars (15½ inches), but because of the seat angle and height and an extra half inch of seat depth, the seating position is entirely comfortable. However, parking space for the left foot between clutch pedal and sidewall is somewhat cramped. The Minx uses a bench-type front seat, 47 inches wide, and because there is no impediment from wheel arches and arm-rests, it is possible to squeeze three in the front seat, too.

On my pet section of "abominable" road, the Hillman with its deeper section cushion tires and added poundage easily rode best of the three cars. Its welded, unitized chassis and body construction was quite free of rattles. Noise level was necessarily lower, too, because the engine was putting forth less effort. To give praise where it is due, the Hillman is the smoothest and quietest-riding small sedan I have tested in a long time.

As in the Austin and Morris, the Minx uses warning lights for oil pressure and generator (gauges are optional at extra cost) and a grouped instrument panel centrally located on the dash, directly above the heater and defroster. A large convex windshield with 683 sq. in. of glass provides an excellent panoramic view; the handbrake is located in the same position as in the Austin. The turn indicator control, operated from a radial steering post lever, is self-cancelling. The exceptionally roomy trunk provides about 15 cubic feet of luggage space, despite the vertical location of the spare wheel.

Comparing all three cars with the Volkswagen on the scores of comfort, convenience and noise level, the Austin A-35 falls a little short, the Morris Minor 1000 is about on par, while the Hillman Minx is clearly superior. It is only fair, however, to bear in mind the price differential between the Hillman and the other cars, and the difference in power.

Driving Ease: Under this heading may be considered such items as shifting, braking, steering and clutch action, together with the manner in which the various controls fall to hand. In the shifting department, the Morris and Austin with their conventional floor

shift levers are superior to the Hillman, which attempts the seemingly impossible—a four-speed shift of steering post type. Reverse is on the lowermost plane; first and second occupy the next plane; third and fourth the upper one. Since you have to lift the shift lever to go from second to third, it is possible for a preoccupied driver to re-engage first gear by mistake, with an attendant horrible clash.

Clutch action is good on all three cars, but a little smoother in the Hillman because of a hydraulic assist; braking also goes to the Hillman which has over 81 sq. in. of brake area per ton, compared with 77.7 for the Austin and 68 for the Morris. Relatively, however, the BMC cars have excellent brake systems about which nobody could complain. Steering is very direct on all three, but the Austin and Hillman have more self-centering action than can be expected from the rack and pinion design of the Morris. This is a matter of taste.

In shifting, none of the three quite matches the VW's four-speed, ultra-fast, synchromesh gear box; in braking and steering they are superior, while in other aspects of driving ease there is little or nothing to choose.

Finish and Appearance: Finish of the A-35 and Morris "1000" can definitely be described as good. Doors, trunk lid and hood all close properly and fit snugly. No rough welds are visible; paintwork is of excellent quality.

The test Austin was finished in medium blue with light blue simulated leather; the Morris in gray with artificial red leather. Interior trim on both cars is a little spartan and on the practical rather than the ornamental side, but the chrome of both cars looked to be of good quality. However, the glove box doors in the Morris were definitely tinny and these receptacles would look better without them. Against this, the Morris uses trimmed pile carpet throughout, whereas the Austin has a rubber mat in the front compartment. Bumpers on both cars are flimsy and quite inadequate to cope with the battering rams of Detroit iron, while the bumper guards are mere toy ornaments.

The Hillman Minx, by comparison, is luxuriously finished, always bearing in mind that it costs \$294 more than the A-35 and \$134 more than the Morris. The test car had a two-tone finish of green and ivory with matching green upholstery of simulated leather piped in ivory—a most pleasing effect. Quality of the paintwork is excellent inside and out; the rear compartment has a matching pile carpet; suspended pedals are featured, while the door handles, window crank handles, detail

trim and control knobs all appear to be of better quality and superior finish to those of the Austin and Morris. Certainly, the bumpers, topped by protective chromed rails, are far more adequate and much stronger.

Handling: This attribute is placed at the bottom of the list for obvious reasons. No modern car handles badly, while the owner of a small economy type family sedan endowed with moderate performance is not likely to expect sports car roadability. All three of this British trio handle very well indeed. By virtue of its extremely short wheelbase, the Austin nips around corners with a zest and stability that belie its appearance. The torsion bar front suspension of the Morris is manifestly superior to the coil springs of the other two cars, but as has already been mentioned, its steering is very direct and almost devoid of self-centering action. The Hillman, by contrast, has a marked caster action which results in slightly heavy steering at low speeds. None of the three cars shows any appreciable tendency towards understeer or oversteer; corners can be taken surprisingly fast under perfect control, although the A-35 is more susceptible to lean, despite its rear stabilizer bar. It would be unfair to say that the Minx handles better than the two BMC cars, but it does handle more comfortably. In roadability and cornering, the Volkswagen has nothing on this trio, despite its superior torsion spring suspension.

To sum up, all three of these British cars have a definite place in the rapidly expanding US small sedan market. Dollar for dollar, the Austin and Morris are a pretty close match for the VW; the Hillman, in a slightly more luxurious bracket, offers proportionately equal value. It is worth noting that whichever of these cars appeals most to the prospective owner, he will be sure of dependable service facilities and an adequate supply of spares from coast to coast. Both BMC and the Rootes Group are well equipped to back up their dealers in ensuring prompt repairs and efficient maintenance.

Choice of the Austin A-35, the Morris Minor "1000" or the Hillman Minx, then, will be governed first and foremost by the number of dollars that the budget-conscious buyer is willing to spend. With any of them, he'll get his money's worth.

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