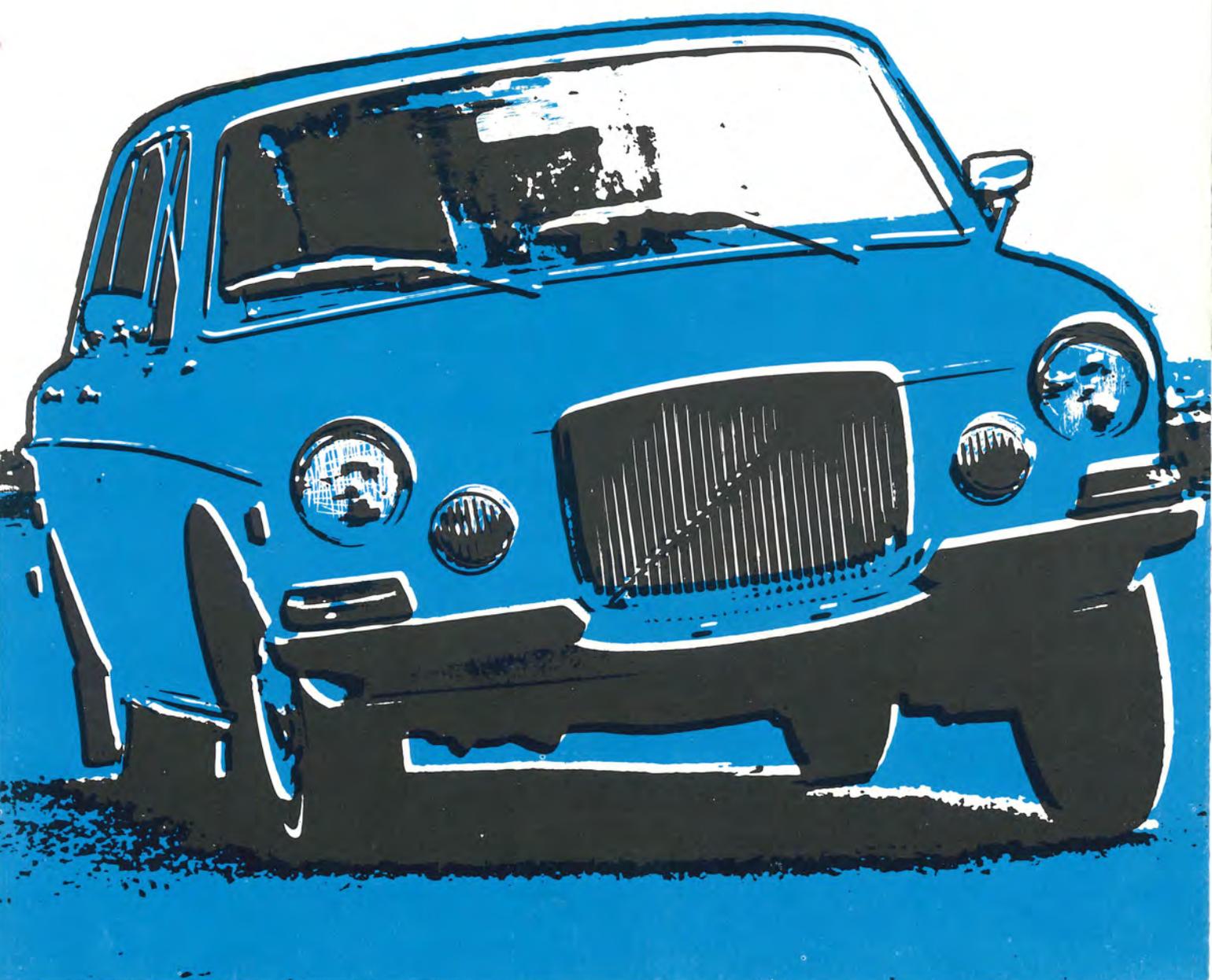


VOLVO 164

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VOLVO 164

To the 144 add a British front end, luxury fittings and a 3-liter six — the results: a conservative sedan that goes



A SIX-CYLINDER Volvo has been in the mill for some time, so it was no surprise when the 164 appeared late in 1968. Details of the car weren't surprising either: it was simply a lengthened version of the 144 sedan with an inline 3-liter 6-cyl engine sharing its bore, stroke and many mechanicals with the 2-liter four of the 140 series.

It took a 3-in. increase in overall length and a 4-in. increase in wheelbase, all in the front end, to accommodate the longer engine. Volvo people say that 164 development was begun concurrently with that of the 140s; the side profile of the car seems to bear this out, looking as if the 164 were the original version rather than the stubbier-nosed 144. Viewing the 164 from the front, we are less impressed with the grille, which appears to have been lifted from late Pininfarina Wolseleys and has a diagonal slash harking back to Volvos of old.

The 6-cyl engine shares pistons, rods and valve gear with its 4-cyl counterpart but has appropriate beefing-up in areas affected by its higher output; like most modern sixes, it has a seven-bearing crankshaft. It bucks a European trend to

overhead camshafts but offers instead generous displacement to get its output of 145 bhp @ 5500 rpm. Behind it is a larger clutch and a new gearbox that has a nice, short, remote-change floor lever instead of the traditional Volvo's long, slanted stick going directly into the box. A redesigned rear axle promises greater wheel bearing life and comes in ratios of 3.73:1 with manual transmission and 3.31 with the optional Borg-Warner 3-speed automatic. The axle is made by Volvo; Dana has previously supplied Volvo axles.

Suspension, front and rear, is different from that of the 140 series only in details such as spring rates. Volvo has remained conservative on the matter of wheel width, using only a 4½-in. rim width. Volvo's first power steering, a ZF unit, will be standard in the 164 for the American market.

The 164's interior makes a good initial impression and then carries through with typical Volvo livability. The high seating position is striking in a day of slinky sedans; real leather upholstery is used for the seats, and the front seats are not only sumptuously contoured but are adjustable in more ways than any we've seen. There is a level longitudinal track for fore-and-aft, a slanted and curved one that changes height and the overall seat angle, a separate seatback adjuster that allows full reclining when the adjustable head restraint is removed, and finally Volvo's exclusive lumbar-support tensioner in the lower part of the seatback. It seems almost superfluous to add that these seats are comfortable! The rear bench seat, wide enough to accommodate three people rather tightly, has a fold-down armrest.

The instrument panel is identical to that of the 140 cars except for a fake wood trim strip (ugh); the traditional Volvo strip speedometer, which we now understand is intended to

be read at the tip of its pointer, and the marvellously convenient pushbutton trip-odometer resetter remain, as does a radio position that's much too far from the driver. The fusebox is behind a snap-off access panel in the center, a nice convenience, and the unusual heating-ventilation dials (which are well illuminated at night) are close at hand and easy to use. Ventilation and heating are quite satisfactory, and air conditioning with its ducting reasonably well integrated into the underdash is available as an option. Vision outward in this six-window sedan is outstanding and could be improved only by elimination of the front-door vent windows.

Interiors of the 164 are available in light blue, brown or grey leather. Our white test car had the blue, a nice shade but perhaps difficult to keep clean. Door panels were two-tone; the attractive carpeting which is used on all floor areas and the rear package tray was the darker shade. There are net storage pockets in the front seatbacks for rear passengers, an ashtray in each rear door, and heat ducts to the rear compartment. There is no courtesy light, however, when the rear doors are opened.

The new engine is extremely smooth and quiet, with only a light tappet noise from underhood to betray its presence at idle and a mild power roar on acceleration. It feels strong—much stronger than its torque or power ratings led us to expect—and revs freely, though we abided by a 5500-rpm limit in our acceleration tests because there was no official word on the redline. The engine isn't audible at freeway speeds, thanks to relatively tall gearing (for this class of car) and excessive wind noise from the front vent windows. A manual choke seems a throwback, but at least you know it's



troublefree; with proper use of it the car starts and runs well from cold, though even when warm there is the same tendency we have noted in 4-cyl Volvos to stumble when starting off if enough throttle isn't used.

On a par with the excellent engine is the new gearbox. It's 100% more pleasant than the already good box in the 140s, simply because of the new shift lever location. The lever itself is an amusingly stocky affair with a huge knob, but we found it to be entirely satisfactory; the synchromesh is unbeatable, the gearbox quiet and the ratios appropriate.

And what does the 164 do with this engine and gearbox? Goes, that's what. The sly-eyed reader can't help but notice that the 164 (3 liters, 145 bhp, 4-speed box, 3.73:1 final drive, 3260 lb) clearly outperforms the MGC in this issue (3 liters, 145 bhp, 4-speed box, 3.70:1 final drive, 2915 lb). Which get us to wondering about power ratings: the B20 engine gets 118 bhp from its 2 liters, and the 164's B30 engine is essentially 1½ B20s. So maybe the rating should be more like $118 \times 1.5 = 177!$ A new kind of conservatism for Volvo?

In ride, the 164 is little different from the 140s; tar strips and other sharp disturbances bring out some harshness, but over gentle undulations or really big bumps the 164 is soft and well controlled thanks to lots of spring travel. Rough roads upset the suspension very little, in spite of the live rear axle, but there are interior and dashboard rattles that prevent the 164 from having a rock-solid feel.

If we calculated a maneuverability-to-accommodation ratio the 164 would have to be the winner among all sedans. Its turning circle is an almost incredibly tight 31.5 ft, and its standard power steering, with a 15:1 overall ratio, removes any trace of clumsiness we have noticed in the 140s. Furthermore, this is the first power steering we've encountered that is as good as Mercedes'—it's about time somebody challenged them.

Open-road handling, too, is pleasant. The power steering imparts all the road feel you need while keeping effort low, and Volvo's suspension geometry gives a final oversteer, brought on by use of the steering wheel only, that comes in smoothly and gets the 164 around a tight turn when many sedans simply mush out. Getting off the throttle will tweak out the rear end a bit more, but at no time did we get a transition from neutral to oversteer that would be sudden enough to trip up even a moderately good driver. Even weight distribution (52% front) must have something to do with this too. Ultimate cornering speeds aren't very high—they could be greater with wider wheels and tires—but are entirely adequate for the type of car, and the overall handling characteristics are more entertaining than you'd expect in a dignified sedan.

Larger front brakes are a part of the 164 modifications, and we found them to maintain the fade resistance level of the 140 in spite of some 375 lb extra weight. Panic-stop deceleration is good, with plenty of control, and Volvo's especially good fail-safe dual hydraulic circuit (which retains part of the front brakes and one rear brake when one hydraulic circuit fails) is noteworthy. Disc brakes all around have come to be expected in cars of this class, and the 164 has them, with handbrake drums built into the rear discs.

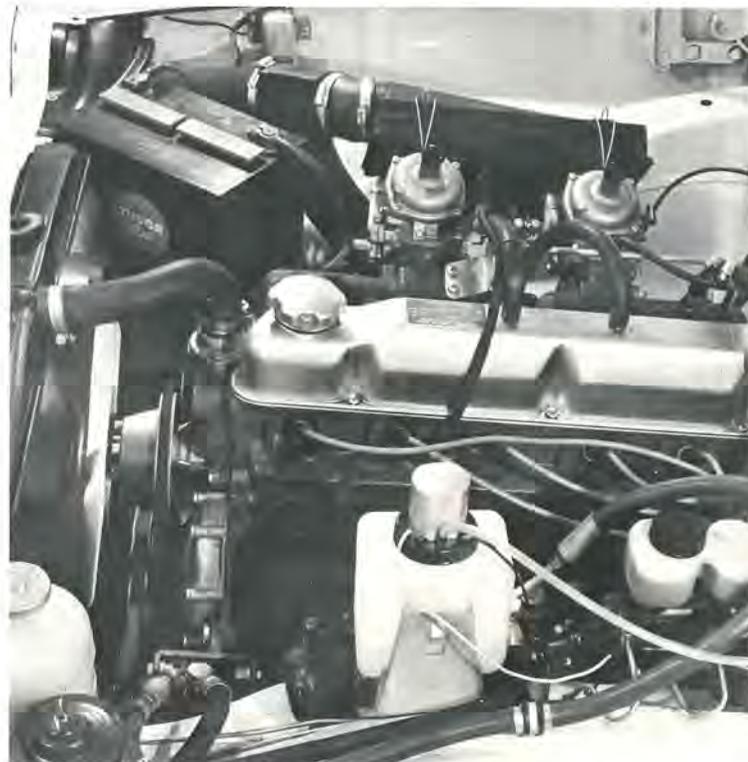
As we have pointed out before, the trunk of this body is cavernous—and it has places for two spare tires in case the owner wants to carry two snow tires around with him. It is also adequately finished and has a light, as does the hood, for night convenience. Additional body touches are the big

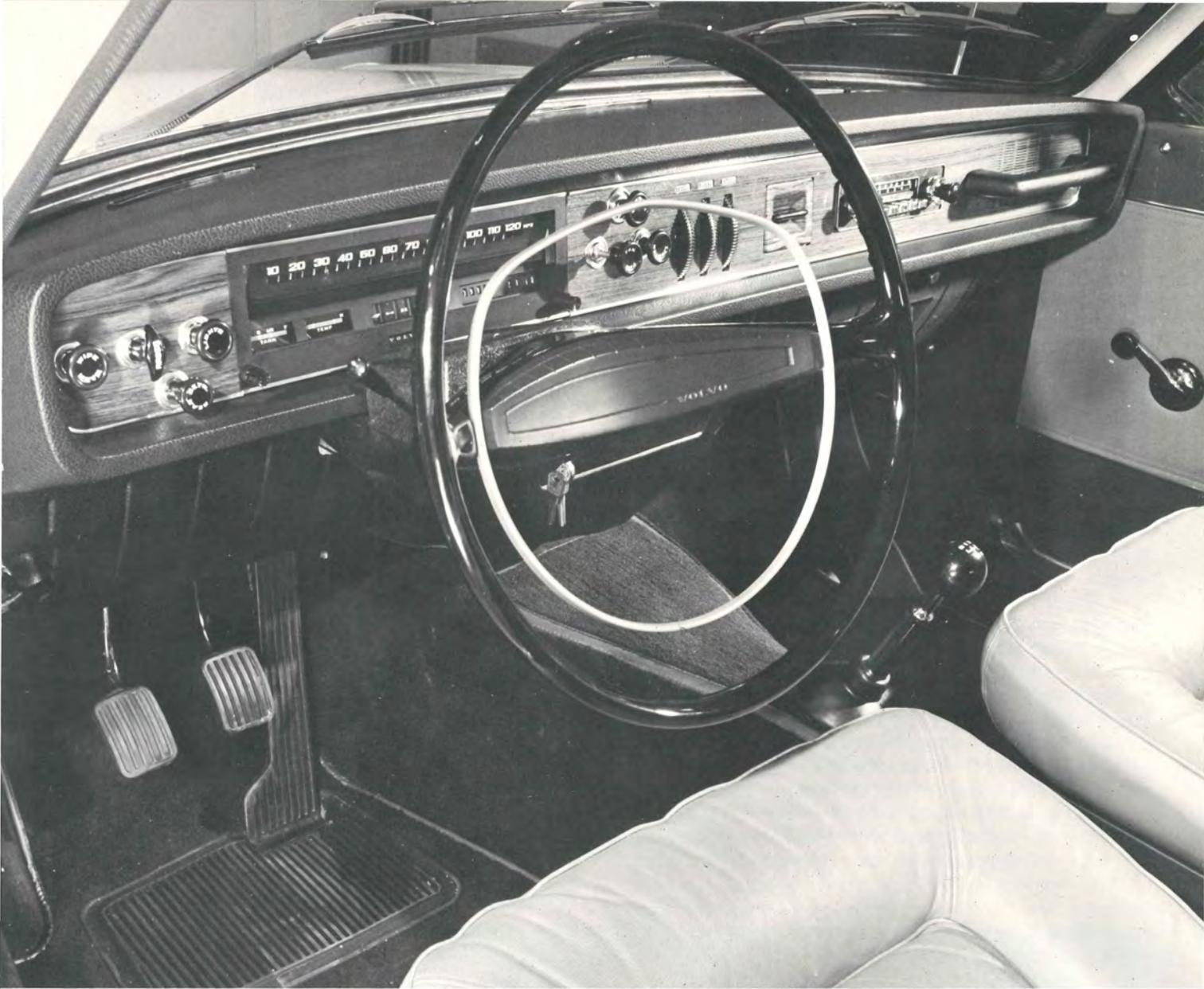
rubber inserts in both front and rear bumpers and a good tool kit in the trunk.

In all, the Volvo 164 is one very fine sedan for \$4160. It has a tremendous trunk, roomy and luxurious interior and the great practicality of previous Volvos now combined with great refinement and, surprise of surprises, sparkling performance that requires no excuses when Volvo owners start comparing their cars with middle-priced, practical U.S. sedans powered by optional V-8 engines. Nearly everything you need is standard—power steering and brakes, whitewall tires, leather upholstery, etc. And there's no reason why Volvo's excellent engine-drivetrain durability record should not apply to the 164. The car certainly sets a new image for Volvo; the styling may not be as prestigious as that of some of its direct competitors, but the car is quite exceptional.

VOLVO 164 ATA GLANCE

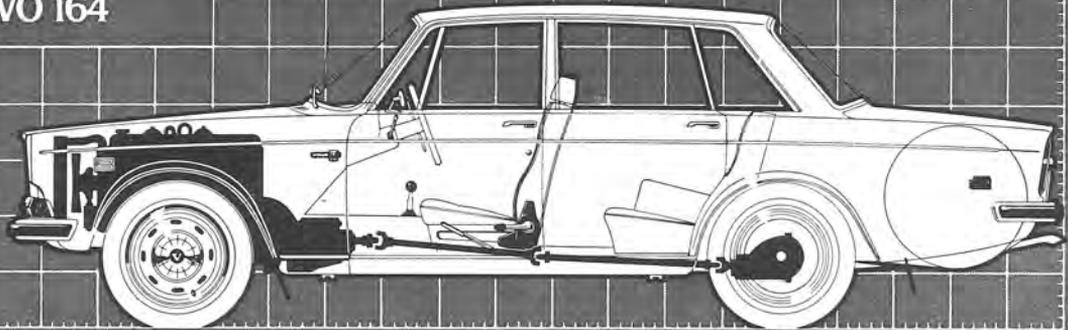
Price as tested	\$4340
Engine	inline 6-cyl, 2979 cc, 145 bhp
Curb weight, lb.	2920
Top speed, mph.	110
Acceleration, 0-¼ mi, sec.	17.6
Average fuel consumption, mpg.	17.5
Summary: new 6-cyl model offers outstanding performance, refinement of running & accommodation at a very attractive price . . . roadholding & braking above par . . . undistinguished styling.	







ROAD TEST VOLVO 164



SCALE: 10" DIVISIONS

PRICE

Basic list \$4160
As tested \$4340

ENGINE

Type 6 cyl inline, ohv
Bore x stroke, mm 89.0 x 80.0
Equivalent in 3.50 x 3.15
Displacement, cc/cu in. 2979/182
Compression ratio 9.2:1
Bhp @ rpm 145 @ 5500
Equivalent mph 112
Torque @ rpm, lb-ft. 163 @ 3300
Equivalent mph 67
Carburetion two 1.75-in Zenith-Stromberg CDSE
Type fuel required premium
Emission control dual induction

DRIVE TRAIN

Clutch diameter, in 9.0
Gear ratios: 4th (1.00) 3.73:1
3rd (1.34) 5.00:1
2nd (1.97) 7.35:1
1st (3.14) 11.71:1
Final drive ratio 3.73:1

CHASSIS & BODY

Body/frame unit steel
Brake type: disc; 10.7-in. front, 11.6-in. rear; handbrake by auxiliary drums.
Swept area, sq in 433
Wheels steel disc, 15 x 4½
Tires Goodyear Power Cushion 6.85-15
Steering type cam & roller, power
Overall ratio 15.7:1
Turns, lock-to-lock 3.7
Turning circle, ft 31.5
Front suspension: unequal-length A-arms, coil springs, tube shocks, anti-roll bar.
Rear suspension: live axle with trailing arms & panhard rod, coil springs, tube shocks.

MAINTENANCE

Engine oil capacity, qt. 6.3
Every 6000 mi: chg eng oil & filter, gen'l lube, cln fuel filter, cln plugs, adj clutch, var. op'l chks.
Every 12000 mi: chk frt-end align, chk compression, chg plugs.
Every 24000 mi: chg rear axle & trans fluid, adj auto trans, chg air filters.
Warranty, mo/mi 6/unlimited

ACCOMMODATION

Seating capacity, persons 4 + 1
Seat width, front/rear. 2 x 21.5/55.5
Head room, front/rear 38.0/35.5
Seat back adjustment, deg. 90
Driver comfort rating (scale of 100):
Driver 69 in. tall 100
Driver 72 in. tall 80
Driver 75 in. tall 70

INSTRUMENTATION

Instruments: 120-mph speedo, 999,999 odo, 999.9 trip odo, water temp, fuel level.
Warning lights: oil pressure, alternator, brake fluid loss, high beam, directional signals.

EQUIPMENT

Standard: power steering & brakes, whitewall tires.
Optional: AM (\$71) or AM/FM (\$136) radio; automatic trans (\$180), A/C (\$354 + instal).

GENERAL

Curb weight, lb 2920
Test weight 3260
Weight distribution (with driver), front/rear, % 52/48
Wheelbase, in 106.3
Track, front/rear 53.1/53.1
Overall length 185.6
Width 68.3
Height 56.7
Ground clearance, in 7.1
Overhang, front/rear 30.2/49.1
Usable trunk space, cu ft 23.2
Fuel tank capacity, gal 15.5

CALCULATED DATA

Lb/hp (test wt) 22.5
Mph/1000 rpm (4th gear) 20.1
Engine revs/mi (60 mph) 2990
Engine speed @ 70 mph 3480
Piston travel, ft/mi 1575
Cu ft/ton mi 96.3
R&T wear index 47
R&T steering index 1.16
Brake swept area sq in/ton 266

ROAD TEST RESULTS

ACCELERATION

Time to distance, sec:
0-100 ft 3.6
0-250 ft 6.1
0-500 ft 9.5
0-750 ft 12.3
0-1000 ft 14.8
0-1320 ft (¼ mi) 17.6
Speed at end of ¼ mi, mph 83
Time to speed, sec:
0-30 mph 2.9
0-40 mph 4.3
0-50 mph 6.5
0-60 mph 9.5
0-70 mph 12.7
0-80 mph 16.3
0-100 mph 33.5

Passing exposure time, sec:
To pass car going 50 mph 7.5

FUEL CONSUMPTION

Normal driving, mpg 17.5
Cruising range, mi 271

SPEEDS IN GEARS

4th gear (5400 rpm), mph 110
3rd (5500) 84
2nd (5500) 56
1st (5500) 35

BRAKES

Panic stop from 80 mph:
Deceleration, % g 81
Control very good
Fade test: percent of increase in pedal effort required to maintain 50%-g deceleration rate in six stops from 60 mph 16
Parking: hold 30% grade yes
Overall brake rating very good

SPEEDOMETER ERROR

30 mph indicated actual 29.6
40 mph 40.2
60 mph 60.2
80 mph 79.4
100 mph 98.0
Odometer, 10.0 mi actual 1.042

ACCELERATION & COASTING

