



ROAD TESTS OF THE VOLVO 164

Volvos have had, in recent years, a rather confused vehicular identity. In size, they have competed most closely with domestic compacts. In price, they have competed with full-sized domestic cars. Their promotion image has been skillfully blended to imply sports-car handling and acceleration, economy-import fuel mileage, and precise, Old-World craftsmanship—the kind that builds a product to outlast an untold number of rugged Swedish winters.

The reality is a bit more prosaic. Volvo's handling and acceleration, at best hardly competitive with true sports-car performance, have deteriorated in recent years as Volvos have grown bigger, heavier and more burdened with power accessories. For the same reasons, Volvo's fuel mileage has fallen substantially below that of the more economical imports. As for fine craftsmanship, Volvos purchased by CU have been plagued with as many defects as most other cars, and Volvo's Frequency-of-Repair record, though better than average, does not surpass that of quite a few other models.

To recoup some of its reputation for nimble performance, Volvo this year introduced its new model 164 with a six-cylinder engine; it provides 30 more horsepower than the Four in last year's Volvo 144. The new Six brings a welcome performance change. With it, acceleration very nearly matched that of full-sized domestic cars equipped with standard V8 engines. The new Six also started and ran well, was quieter and smoother than the Four, and could spare the power needed to work accessories that come with the car.

The Volvo 164 is, in fact, replete with power assists and convenience features. In addition to the Six and power steering, it has power disk brakes on all four wheels, reclining front seats, leather upholstery, carpeting, whitewall tires, tinted glass and a rear-window defogger. All are in the purchase price—you can't buy the car in this country without them. A three-speed automatic transmission is \$180 extra; an AM radio with rear speaker is \$100 extra; air-conditioning is \$406 extra. We bought all three.

So equipped, the 164 offers most of the power and convenience features you can buy for a domestic car. But if you want that loaded Volvo, you had better be pretty well

loaded yourself. It costs a fat \$4800, without the air-conditioning, \$4400. That's about \$1000 more than last year's Volvo 144 with automatic transmission and nearly all of the 164's furnishings.

The Volvo 164 comes only as a four-door sedan that is about as long and wide as a Plymouth Valiant. The 164 has four inches' more wheelbase and is three inches longer overall than the Volvo 144, but those added inches do not translate into more passenger space; both the 144 and the 164 are too narrow to seat more than four passengers easily—a fifth would be tightly squeezed in the back seat, as he is in an American compact. Fore and aft, though, there is plenty of room for knees and feet in either Volvo.

The 164's front seats were even more comfortable than those in the four-cylinder Volvo. They adjust up and down through three positions (about an inch and a half in all), the lower seat back behind your spine can be made softer or firmer, and the seats travel seven inches backward or forward. With the seat all the way back, the driver has 46 inches of leg room, more than in any car CU has ever tested. But even with the front seat as high as it would go, several of CU's drivers felt the steering wheel was too high—and the horn ring sometimes obscured the speedometer ribbon.

The 164's rear seat was more comfortable than the 144's, but was still only fair on CU's scale. Volvo claims three can ride there, but the 53½ inches in shoulder width just aren't enough, and the center armrest, when folded up, wasn't comfortable as a back rest.

Not much of a ride

Both front and rear suspensions on the 164 failed to insulate the occupants from small, sharp bumps—we felt even the tar strips on freeways as distinct impacts. Still, front-seat passengers rode more serenely than those in back. Even under a light load (three adults), passengers in the rear seat bobbed or bounced or snapped along on relatively smooth roads. Under full load—the equivalent of five passengers and 300 pounds of luggage—the ride was even worse.

At full load, the Volvo's rear tires are overloaded when

they're inflated to the light-load recommendation (23 pounds per square inch in front, 24 psi rear). If more than two passengers are to be regularly carried, CU suggests the full-load tire pressures (24 psi front, 30 psi rear) be used all the time to avoid overloading.

Although the *Volvo* was certainly smoother and quieter with the six-cylinder engine than with the Four, there was still a lot of road noise, audible in both front and rear seats. And the whole car shuddered whenever we accelerated from rest.

The Six did start and respond better than the old Four, and part of the credit for the improvement goes to a new thermostatically controlled carburetor air intake that also comes on late-production Fours and can be put on older Fours by a dealer. With it, you need the choke for only a minute or so for a cold start—a great improvement.

After testing last year's *144* with automatic transmission, CU recommended against the option mainly because of sluggish acceleration. The *164* with automatic transmission did much better, performing at wide-open throttle about like 1969 *Ford Galaxie* or *Chevrolet Impala V8s* with automatic transmission. But part-throttle response in climbing hills or passing at highway speeds did not feel as willing.

In our test of the 1968 *Volvo 144* we noted that the accelerator pedal and linkage were not designed to take the full force of a hard kickdown—they bent. The *164's* linkage is similar to the *144's*—and it too bent during our driving of the car. Once bent, the linkage can be straightened, but the parts are then weakened and may be more easily rebent. The bending can occur in different ways, and it is possible that one way could result in a throttle that doesn't completely return to idle. Until *Volvo* can engineer a change in

this area, *Volvo* owners should periodically check their accelerator pedal and adjacent throttle shaft for evidence of bending. If it is bent, replace it.

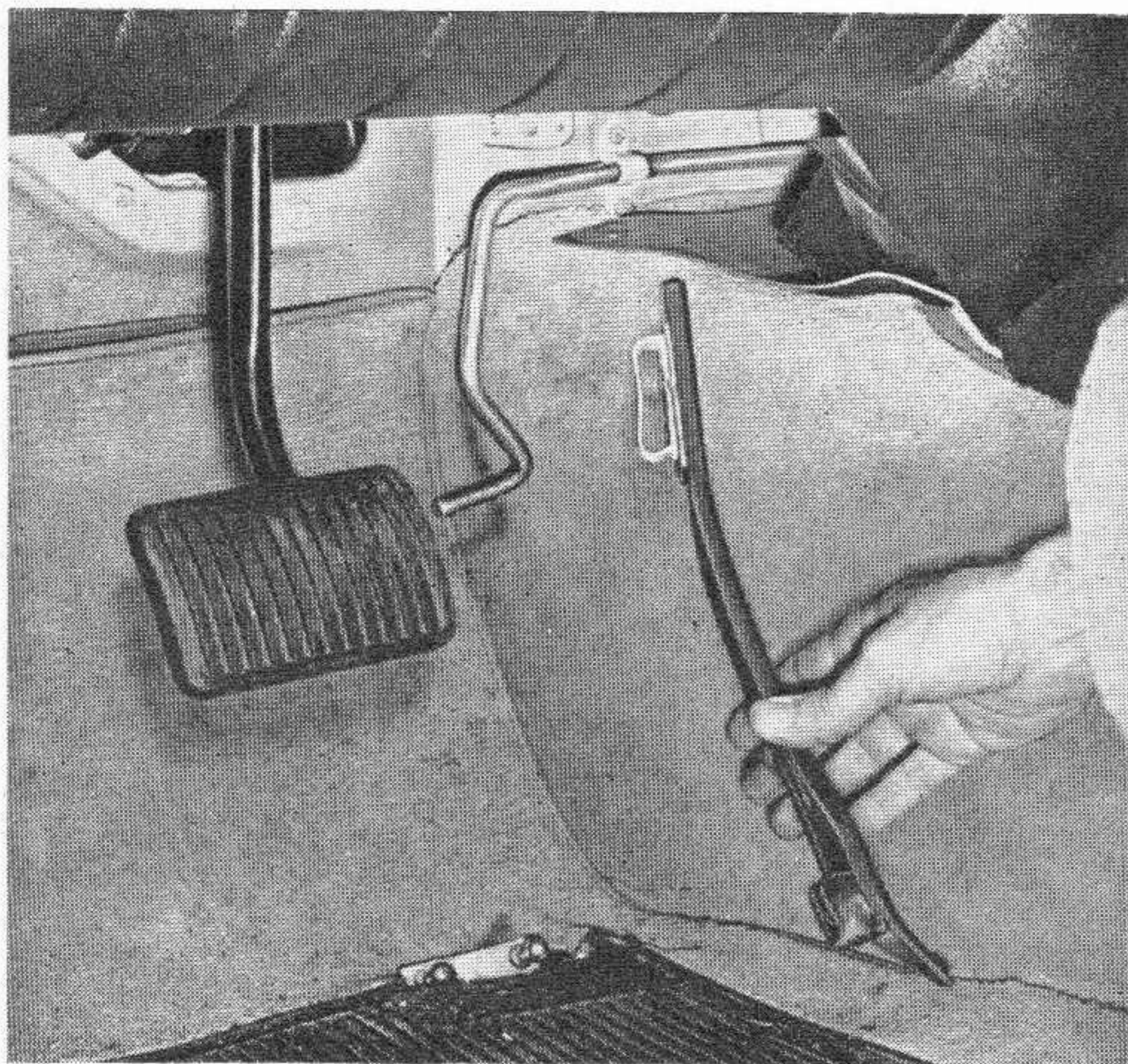
The *164's* gas mileage, on premium fuel, was relatively poor around town and at higher speeds—certainly no match for the more frugal economy imports.

The *164* comes with power steering—a good thing, since the *144* was quite hard to park and to steer at low speeds. Power steering should never be completely effortless, and the *Volvo's* isn't. But a driver should be able to get more feel of the road than the *164* provided.

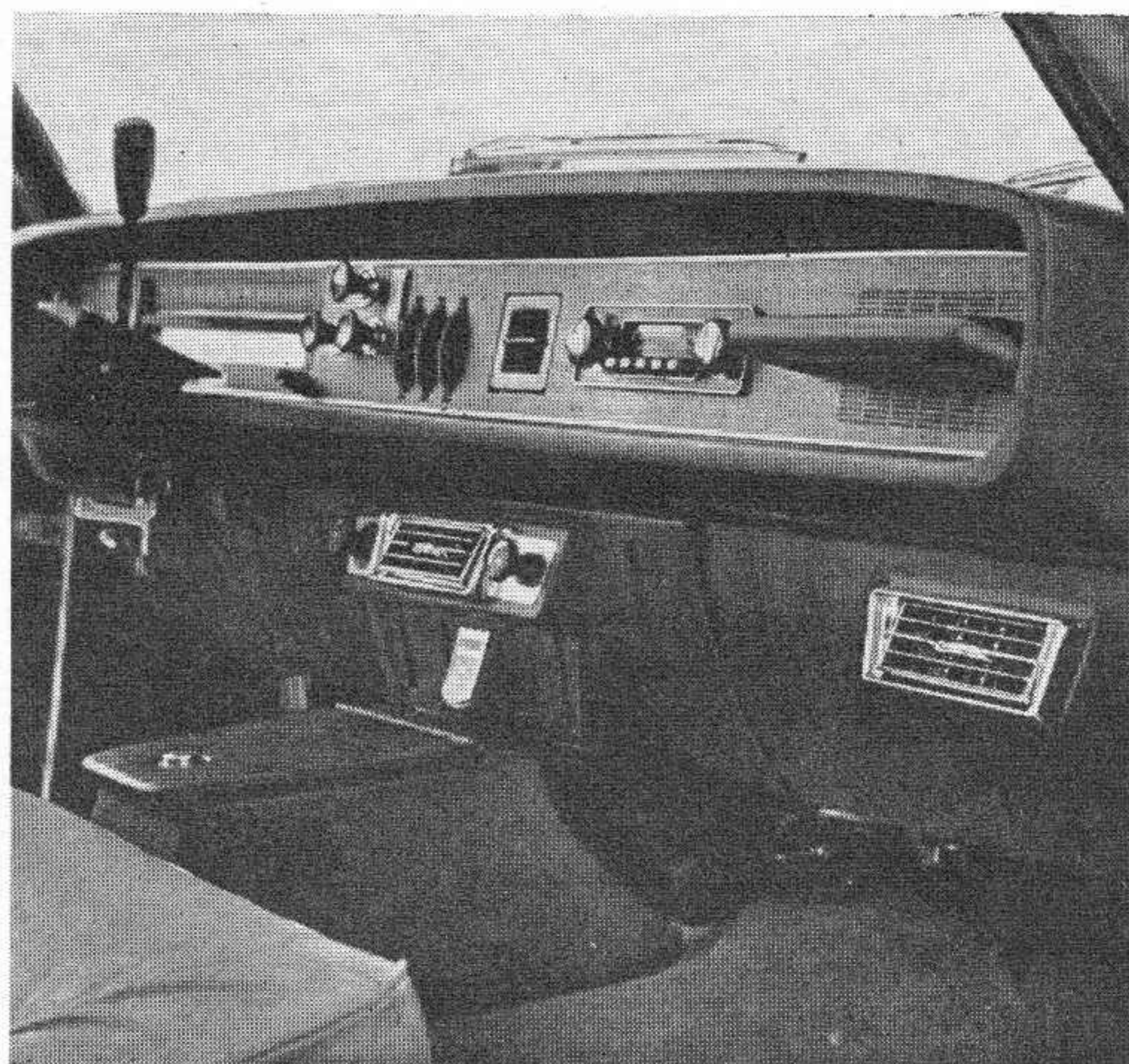
Handling in normal driving was judged fair-to-good. In turns over rough roads, the rear end would hop and skitter sideways. In hard driving at the test track, the *Volvo 164* behaved about like most full-sized U.S. cars; moderate understeer changed smoothly and controllably to oversteer. The *Volvo* did lean more in turns than the average car and it scrubbed its tires far up the sidewalls (see photo, page 592).

Volvo's four-wheel power disk brakes were as good as ever. The power boost was more pronounced in the Six's brakes than in those of the Four, so that braking was actually too easy for optimum control. But there were no fade problems, and the car made a well-controlled stop from 60 miles per hour in 150 feet.

Inside and out, the *Volvo 164* is commendably free of hostile projections. The steering wheel is padded, and there's a steering-wheel lock. The *164* has three-point front-seat belts that require only one fastening and a single adjustment for both lap and shoulder portions. Lap and shoulder belts that require separate adjustments are thought to be somewhat more effective than the *Volvo* system but



The throttle linkage, of poor design, bent under hard usage. Bends might keep pedal from returning to the idle position



Air-conditioner components occupy glove compartment area (lower right); the unit adds about \$400 to the car's price

VOLVO 164 continued

the *Volvo* belts are fairly easy to adjust and use. And a large-scale accident study in Sweden indicates that *Volvo* belts have effectively reduced the severity of injuries. One carp: With your belt fastened, you'll probably have to ask your passenger to work the radio controls; they're in front of him.

The other controls are easy to reach—but bewildering. For one thing, you have twin switches for headlights and wiper/washer to the left of the steering column, separated by the choke handle. And the wiper/washer switch, contrary to usual U.S. practice, is to the left of the light switch. Just underneath is another round knob—the rear-window-defroster switch. To the right of the steering column is another battery of identical round knobs—for the heater fan, the cigar lighter and the emergency flasher. All those controls are labeled but unlit, so the driver must either grope for the right one or take his eyes off the road. By contrast, the 1969 *Chevrolet's* controls are completely differentiated by shape, mode of action, and location.

The top of the *Volvo's* gas tank, as with a number of other imports and some Ford products, is also the floor of the trunk. And the filler-pipe connection and the fuel-vent line, both of rubber, run through the trunk, where they could be punctured by sharp-edged cargo. Better practice is to put the gas tank outside and separate from the body shell, and far enough away from the car's outer edges to minimize its chances of being ruptured in a collision. Unlike our 1968 *Volvo 144*, the *164* does have an energy-absorbing telescoping joint in the steering column; we were not able to test its ability to absorb energy.

Air-conditioning

For our *Volvo* we bought a factory-approved, hang-on air-conditioning unit that was installed by the dealer. It recirculates only the air inside the car—you must let fresh air in when it's needed. The installation takes up the glove-box space and limits access to the fuse panel, but the controls are easy to reach and the three cooling outlets are spaced well apart to distribute the air evenly. While the car was under way, the engine easily handled the extra load, and the compressor clutch was quiet. The unit cooled the car adequately—about as well as most U.S. factory-installed units do.

But it has some rather serious faults. First, when the air-conditioner was on, the engine stalled frequently if the car idled for any length of time. That's a nuisance in summer stop-and-go traffic, when you really want air-conditioning. You must put the car in neutral and race the engine whenever you come to a stop. Otherwise, out she goes, just about every time.

Then: The radiator boiled over too readily at idling engine speeds with the unit on. *Volvo* has now made available an engine fan of more capacity than that on early-production *164s* like ours. We had the larger fan fitted, and the boilover stopped. We suggest that any buyers of the early *164s* have their dealer fit the new fan. But it won't help the hot stalling, unfortunately.

Then: The unit has no provision for de-icing. When the temperature control was turned to full cold, under certain weather conditions the evaporator core iced up. When it did

there was no more cool air until it thawed. That behavior didn't damage the unit, but it's a nuisance. And we found that the unit didn't keep the humidity at properly low levels except when it was set at full cold, a failing common to most hang-on units.

In addition to the design problems we've noted, our particular car had more as-delivered defects and early failures—34 items in all—than the average for all tested cars this year. When the transmission was cold, the engine would race during the shift from second to third gear. Oil leaked profusely from the transmission. In addition to the poor throttle design we have mentioned, our car had a loose support bracket for the throttle shaft on the engine, so that the throttle would not close fully. As received, the engine itself started stubbornly when hot and then often died. There was no fast idle (which increases engine speed when the choke is operating) and the engine idled roughly when hot. The right-front window came loose and fell down inside the door; the left-front window wouldn't travel in its groove; the right-rear-window crank bent. The lever for the turn signal got stuck, the wipers skated up off the glass and one tire was defective. And there were those problems that we've become accustomed to—incorrect tire pressures, incomplete body preparation, improperly aimed headlights and air leaks.

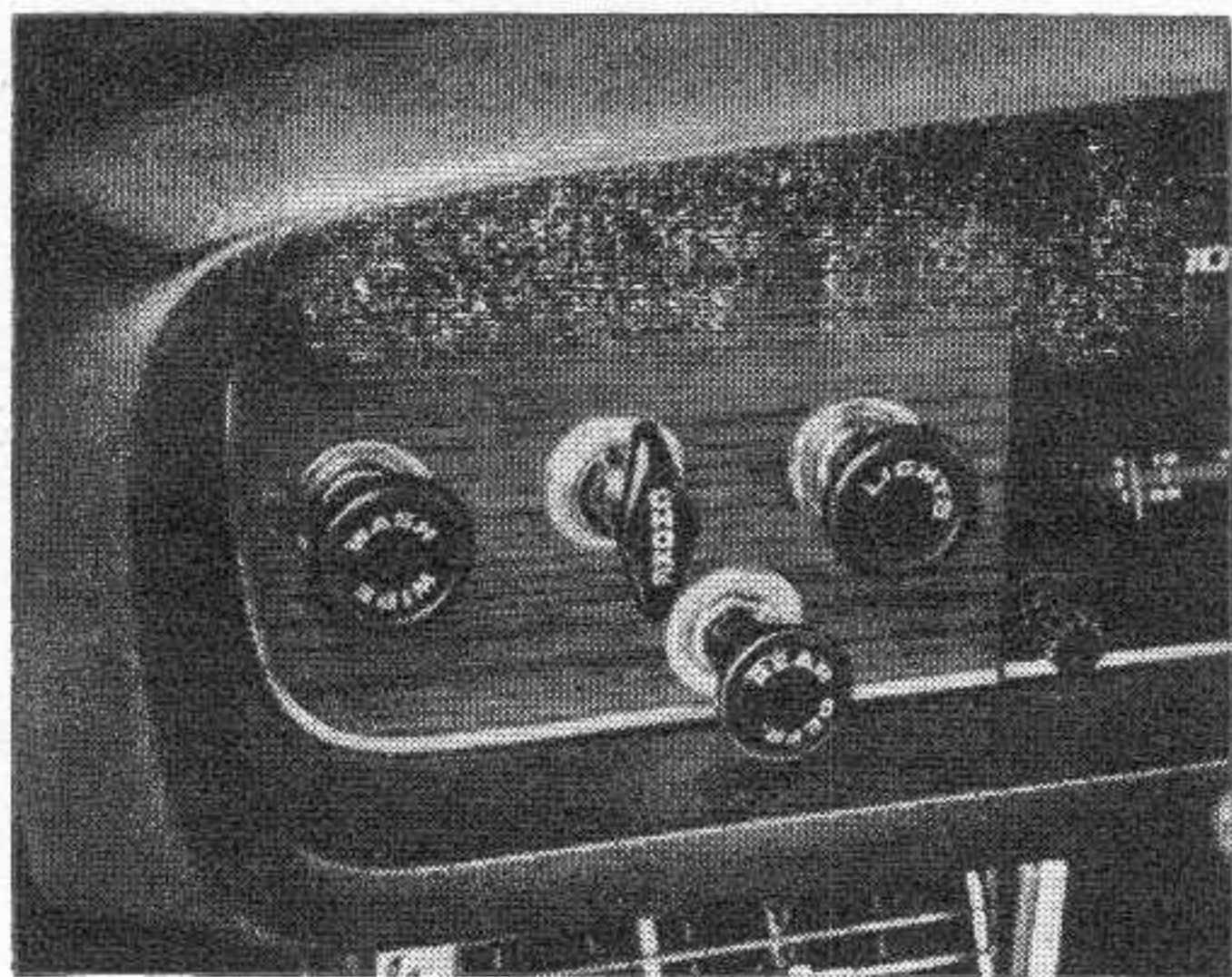
Conclusion: The *164* costs a lot

Over the years, *Volvos* have consistently combined relatively small external size with roomy interiors and comfortable front seats. The *Volvo 164* maintains that tradition. But an ill-designed rear suspension brings severe discomfort to rear-seat passengers. There's also a flimsy throttle linkage and a few other significant deficiencies in design and performance. And the *Volvo 164* has a high price tag.

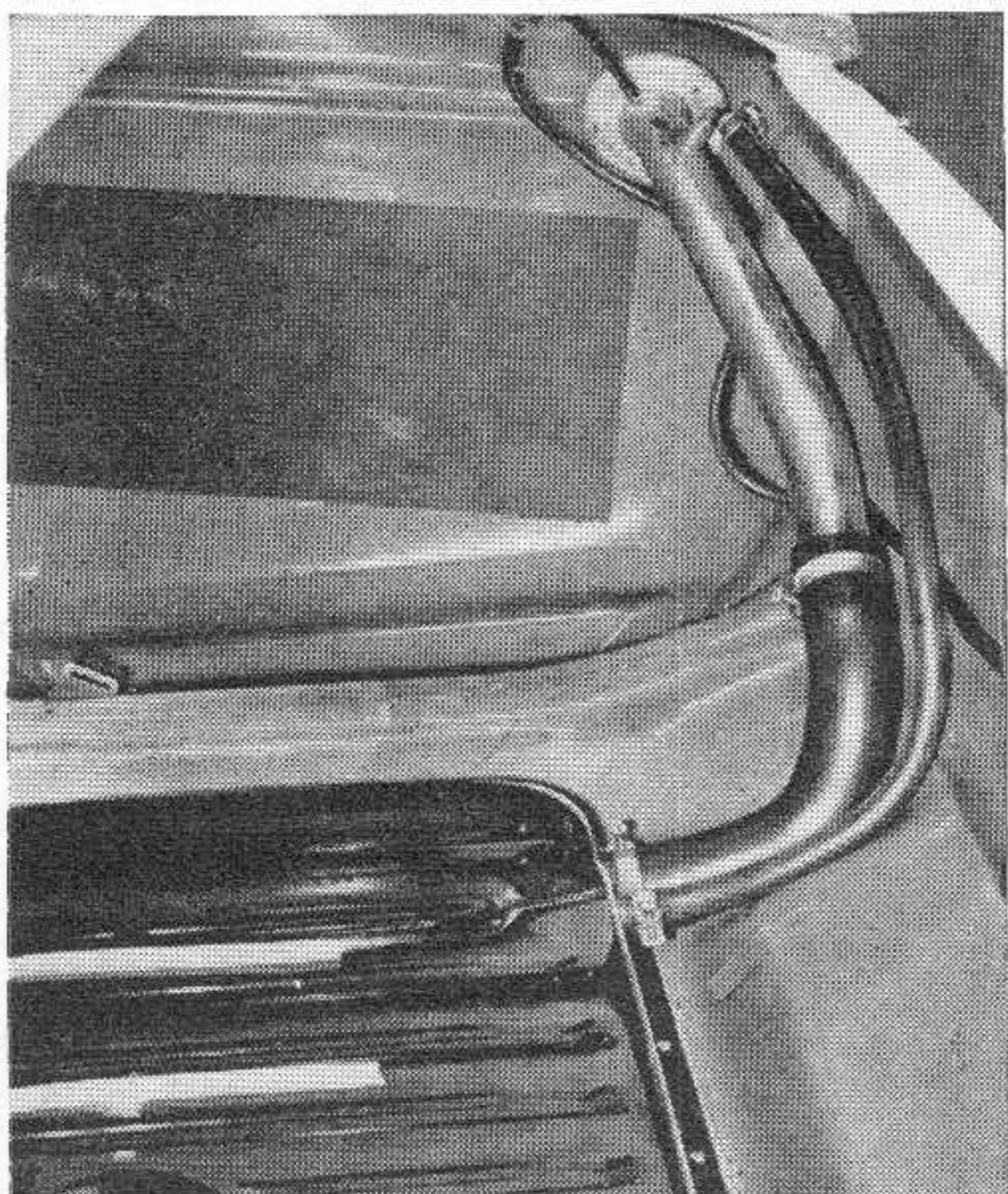
A list price of \$4400—\$4800 with air-conditioning—is really quite a clout. For about \$4700 you can get a top-rated full-sized V8 station wagon with air-conditioning and a full set of power options, or a top-rated domestic sedan or hard-top in the medium-priced class. They have nearly all the amenities the *Volvo 164* boasts and a few it doesn't—the ability to carry six people in reasonable comfort over a long haul and a dealer-service network that's much more complete than the *Volvo's*.

Those full-sized cars are, of course, a foot wider and at least three feet longer—far less maneuverable than *Volvo* in traffic, on narrow roads and in parking lots. Many people who don't want that big a car may be attracted by a domestic intermediate or compact that sells for substantially less than the *Volvo 164*. Of if they are sold on the front-seat comfort of the *Volvo*, they can make their purchase less painful by buying a *Volvo 144* (or *142*, the two-door version). Its 1969 Four didn't have as much power as the *164's* Six, but the Four we check-tested had more than the Four had last year; it also started and ran well, and is more compatible with an automatic transmission than it was last year.

The *144* actually rode better than the *164*, and its front seats were quite comfortable if not as adjustable as those on the *164*. But the Four does not come with power steering, which it could use to advantage. Finally, the *144*, which costs \$1000 less than the *164*, has a good resale value and an above-average Frequency-of-Repair record. The repair record and resale value of the *164* are undetermined as yet.



By night it's hard to see which unlit control is which. Even by day it's easy to grab the wrong one in this cluster



Although covered with thin matting and cardboard, fuel-tank top (which serves as the trunk floor) and fuel-vent lines shown at right might rupture in a crash or be pierced if they should be hit by some sharp-edged cargo



Leg room in the rear is generous. But the outboard mounting of the rear lap belt should be farther back than this

FACTS AND FIGURES FOR VOLVO 164

MFR'S SUGGESTED RETAIL PRICE

At East Coast port of entry for 4-door sedan (see story) with automatic transmission and AM radio

\$4423[Ⓐ]

DIMENSIONS

WHEELBASE (inches)	106
OVERALL LENGTH (inches)	186
OVERALL WIDTH (inches)	68
OVERALL HEIGHT (inches)	57
ROAD CLEARANCE: no load (inches)	6.5
with maximum rated load (inches)	5.1
TURNING-CIRCLE DIAMETER (wall-to-wall in feet)	35
STEERING FACTOR: power	0.78
ADVERTISED FUEL TANK CAPACITY (gallons)	15
LUGGAGE CAPACITY (2-suiters+weekend cases)	4+4

WEIGHT AND TIRES

CURB WEIGHT (pounds)	2946
PER CENT WEIGHT, Front/Rear	54/46
TIRE SIZE (inches)	6.85x15
TIRE RESERVE CAPACITY AT MAXIMUM LOAD (pounds)	
Front tires	+329
Rear tires	-165

ENGINE[Ⓑ]

TYPE	6
DISPLACEMENT (cubic inches)	182
COMPRESSION RATIO AND FUEL REQUIRED	9.2P
MAXIMUM ADVERTISED HORSEPOWER AT RPM	145@5500
ENGINE REVOLUTIONS PER MILE, HIGH GEAR	2705
PISTON TRAVEL PER MILE, HIGH GEAR (feet)	1420
AXLE RATIO	3.31

ACCELERATION

ON LEVEL ROAD	
0-60 mph from rest (seconds)	13.5
¼ mile from rest (seconds)	20.0
Speed at end of ¼ mile (mph)	74
45 to 65 mph (seconds)	8.0

ECONOMY

CONSTANT-SPEED GAS MILEAGE	
at steady 30 mph (mpg)	28.5
at steady 40 mph (mpg)	29.0
at steady 50 mph (mpg)	25.5
at steady 60 mph (mpg)	19.5
RANGE OF GAS MILEAGE TO BE EXPECTED IN NORMAL USE (mpg)	11-23

BRAKING

LEVEL BRAKING FROM 60 MPH	
Minimum distance controlled stop (feet)	150
FADE TEST: pedal effort for initial ½ g stop (pounds)	30
Effort for 10th repeated stop (pounds)	35

[Ⓐ] Includes storage and handling at dock-side (\$41), and dealer preparation (\$107).

[Ⓑ] From manufacturer's specifications.

ROAD CLEARANCE. Distance from level road surface to lowest part of car likely to strike road.

TURNING CIRCLE. Diameter of the path of the outermost tip of front bumper with wheels turned all the way left.

STEERING FACTOR. Number of turns of the steering wheel for right-angle turn of 30-foot radius.

CURB WEIGHT. Measured weight of CU's car full of gas, oil, water.

TIRE RESERVE CAPACITY. The tire capacity as specified by Federal Safety Standard 109 for the front and rear tires at normal inflation pressures, minus the curb weight of CU's test car carrying its maximum rated load distributed between front and rear. A minus number indicates tires are overloaded and must be inflated to higher pressure, or oversized tires should be used.

ENGINE REVOLUTIONS AND PISTON TRAVEL PER MILE. A lower number means, in general, less engine wear, less noise, less acceleration in high gear and better fuel economy.

ACCELERATION. 0 to 60 mph and ¼-mile runs with engine idling at start and transmission gears selected for optimum performance; 45 to 65 mph passing test with accelerator pedal floored and transmission shifting automatically, or using gears to maximum advantage. Times to nearest 0.5 second.

ECONOMY. Constant-speed, level-road tests are corrected to 60°F outdoor temperature and offer a controlled comparison between test cars. Since gas mileage in actual use will be much lower, the range of mileage to be expected is shown. Low figure is for short-range stop-and-go traffic; high figure is for open-road, constant-speed trips. Miles per gallon to nearest 0.5.

BRAKING. The minimum-distance controlled stop is made from 60 mph and represents the shortest distance (to nearest 10 feet) achieved in several attempts, with the car stopping in a straight line and no uncontrolled skidding. Actual distances apply only to CU's test conditions including its road surface; but the relative ranking is unlikely to change. The fade test consists of 10 moderate stops from 60 mph repeated at ½-mile intervals. The difference in pedal effort between the first and 10th stops represents the degree of fade. Pedal effort is to nearest 5 pounds.