

# THE BALANCED CONCEPT CAR

**Nothing was overlooked in designing the Volvo 164E, nor was anything sacrificed to enhance something else.**



Whether by design on the part of domestic manufacturers or by public demand, car sales have tended to be faddish for the last two decades or so. At one time or another, personal cars, compact cars, pony cars, muscle cars, etc. have occupied the limelight, only to lose their "in" status to something else. (At the moment it appears we're entering an era of "small" cars.) Tastes, not needs, it seems, dominated the choice of cars in the past.

That minority of car buyers looking for the "just right" car have never been too pleased with what they find on the domestic scene, and many of them have turned elsewhere. If you wanted luxurious appointments in something that would fit into your 1920s vintage driveway and garage, that combination couldn't be found in Detroit products. The same goes for reasonable power with economy. One could build a pretty good case that the domestic 6-cylinder engine has been deliberately down-

graded below its true potential in order to escalate buyers to V8s.

Whether you blame it on styling or lack of demand by the majority of domestic car buyers, our homegrown cars are woefully inefficient in regard to the ratio of useful passenger and luggage space to the overall dimensions. Our station wagons are better, and vans of course are quite good in this respect, which accounts for the fact that so many have come to be used for personal transportation in place of passenger cars.

The Volvo 164E is one of the imports that many have found to embody everything they perceive to be lacking in domestic cars. Most people who drive domestic products look upon the Volvo as a "small" car, but that is pure illusion. Anyone under 6 ft. 6 in. will find enough room, and provision is made to remount the front seats for an inch more leg room. As it is, drivers as tall as 6 ft. will find that it is possible to move the seat

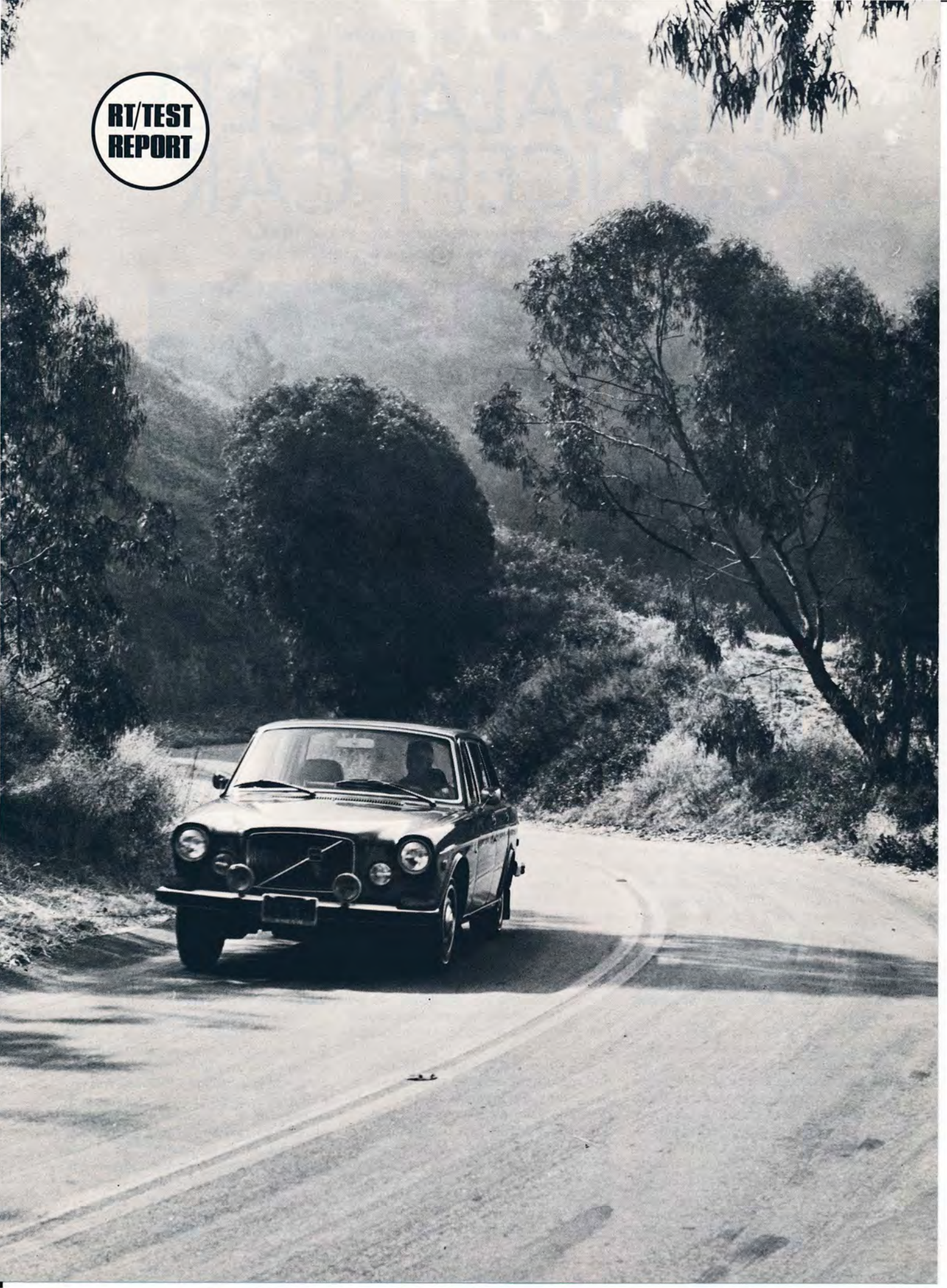
too far back for comfortable operation of the controls. And when it comes to luggage space, that of the 164 *exceeds* that of lots of domestics measuring a foot wider and *feet* longer. What's more the Volvo's box-shape trunk is of a more useful shape. Yes, the Volvo's a "little" car when it comes to washing, parking or garaging it, but it's closer to a "full-size" car when it comes to hauling people and things in it.

Fuel Economy is something many domestic car buyers never thought much about so long as the fuel tank was large enough that they didn't have to stop too often for gas. But the inefficiencies introduced by smog controls and the grim realities of the gasoline shortage and price hike has changed that. People that were willing to pay \$6000 for a medium-price domestic without qualm are beginning to look upon sub-10 mpg fuel economy as the last straw.

Fortunately for Volvo they have, over the last few years, come out with in-



**RT/TEST  
REPORT**





egrated heating/air conditioning and power steering to go with the automatic transmission they have been offering for quite some time. These three items have long since been considered necessities rather than luxuries by the majority of car buyers. One Los Angeles Volvo dealer reports an increasing number of "conquest" sales to people trading in domestic medium-price and luxury cars whose primary gripe was fuel economy and fear of the gasoline shortage. Volvo and Mercedes provided the comfort and performance they were accustomed to and the economy they were seeking, with Volvo getting the nod in many cases because of its substantially lower price.

Volvo has reduced the options list to one item, a sun roof, and shrewdly offers the choice of either an automatic transmission or a 4-speed manual gear box with electric overdrive operating on 4th

tachometer, plus warning lamps is displayed in front of the driver and carefully arranged so as not to be obscured by the massively padded steering wheel. The standard combined heating/air conditioning system has a total of 10 outlets, counting those for the rear passengers, and in the cooling mode performed fully on a par with the best domestic ones. No cold weather was encountered during the test for evaluating the heater, but based on previous experience with Volvo heaters, it is expected to perform well also. Unlike on some previous models of Volvos, the glove compartment isn't sacrificed with this air conditioner installation.

Volvo has adopted the type of radio antenna that's contained in the windshield which has, on other cars, a reputation of not equaling the performance of the mast type. But the reception on the AM/FM stereo multiplex radio (by

both front wheels (via separate slave cylinders) and the other rear wheel. Thus any single failure would leave brakes on both front wheels and one rear wheel, which will produce 80 percent of the braking power given by all four wheels. This is far more effective than conventional systems that put the front wheels on one circuit and the rears on another. Should a failure occur in the front circuit, a car would retain only about 30 percent of its braking power since it is the front brakes that do most of the work.

The 164E uses a proportioning valve to relieve hydraulic pressure to the rear brakes during hard stops to prevent them from locking which, in our stopping tests, proved 100 percent effective. All stops with the 4-wheel disc system were straight, short and highly confidence inspiring.

Also confidence inspiring — and easy to wear — are the four, two front and two rear, 3-point inertia reel safety harnesses. The 3-point restraint system was pioneered by Volvo long before Federal safety laws were ever thought of, and it now looks as if it might become standard throughout the industry.

With 15-inch wheels and longish wheelbase, the 164E's ride is quite pleasant. Spring rates are moderately firm which gives good road feel and eliminates excessive body sway without introducing harshness. Interior noise level measured 71 dBA at 60 mph and 73 dBA at 70 mph. While quite acceptable, it would have been even better had the front passenger's seat not had a habit of rattling when unoccupied.

The 164E understeers mightily when pushed hard through tight turns, but same characteristic makes it feel supremely stable through long sweepers. Volvo's power steering (by ZF) is subtly calibrated to feel much like that of non-power assisted steering on a very light car, which is to say it feels very natural. It feels very much like power steering used by Mercedes.

The sole option for the car, the manual sun roof proved to be among the best we've come across when it comes to freedom from "drumming" at higher speeds and keeping drafts from entering. This desirable aerodynamic and acoustical performance is due to a small lip that raises along the forward edge of the roof opening when the roof is cranked open. To the eye it looks as if it is too small to be effective, but it works.

Speaking of options, it should be explained that, by Volvo's nomenclature, such items seen on our test car as the aforementioned radio (\$195), fog lights (\$59.95) and trailer hitch (\$N.A.) are *accessories*, not options, and their cost should be added to the price shown in the spec table to determine the price of the car as equipped.



gear. The Los Angeles dealer previously referred to says that 9 out of 10 of his customers opt for automatic. Volvo found that, as a national pattern, the automatic is the predominant choice in congested urban areas while the 4-speed/OD outsells the automatic in less congested, less populous localities. Volvo buyers are a sophisticated lot.

On getting into the 164E one is immediately impressed with the deep, oversize leather seats which have a height adjustment as well as generous fore and aft movement. The rake of the seat back is infinitely and quickly adjustable in any position to fully reclined by means of a friction lock. Then there is the famous Volvo Adjustment that varies the firmness of support in the lumbar region of the back when a knob is turned. There's plenty of space both between the seats and between the seats and the doors for full freedom of the elbows. The parking brake lever is located to the left of the driver's seat alongside the door sill instead of the usual place atop the drive tunnel.

A full array of instruments, including a

Blaupunkt) was perfect in every respect. It tuned in and held on to stereo stations very well, and tone quality was of a high order.

The automatic transmission is programmed to shift at fairly low rpm for good fuel economy. With the accelerator held fully depressed, the one in our test car shifted between 3500 and 4200 rpm, depending whether it was warm or not. We discovered that moving the selector manually from 1st to 2nd and 2nd to drive at 5500 rpm would cause shifting to occur at 6000 rpm, would quicken the ¼-mile times about 3 seconds and better the speed at the end by over 15 mph. This is explained by the fact that the Bosch electronic injected 6 produces peak power at 5500 rpm and peak torque at 3500. The automatic programming keeps the engine speed too far below its best power and torque range for maximum performance.

Volvo dual braking system uses a pair of "triangular" circuits, the first of which acts on both front wheels and one of the rear wheels, and the second acts on





Rear deck lid is counterbalanced with gas filled spring devices (used by Volvo for several years) which allow it to be positioned low to keep out rain or snow when trunk is being loaded or unloaded.

Instruments are well located for easy viewing. Air conditioning outlets can be seen on either side of central clock and at left end of dash. There are a total of 10 outlets for heat and air in the front and rear passenger compartments.

Square, flat-bottom trunk has more cubic feet capacity than many "full-size" cars.

4-wheel disc brakes make car outstanding stopper. Front wheel is seen locked, causing the tire to smoke, while rear remains unlocked because of proportioning valve.







*Willing 3-liter L-6 has lots of accessory pulling to do beside propelling car.*

The 3-liter L-6 engine powering the 164E is nothing more than one of their 4-cylinder engines with 2 more cylinders added and the bore and stroke left the same. There's nothing at all exotic about the time tested design or the materials used to make it. What makes the engine clean, powerful and economical is the electronic fuel injection system. As with other cars we've driven with this Bosch system, cold starting, driveability, performance and economy were more than satisfactory. One can't help but wonder why something like it isn't used on at least some domestic cars.

The 164E is the type of car that the longer you live with it, the more you respect it. You find it difficult to single out any one feature or piece of gadgetry to serve as the nucleus of your affection. You like the *whole* car. No, it's not the Swedish steel from which it's formed, nor "foreign mystique" or anything of that sort that converts car buyers to Volvo. It's the *total concept* and balanced design that gets through to people whether they identify it as such or not. Only in the grille do you see where the designers have indulged in anything abstract. Just about every other ounce of metal in the car was fashioned with some definite purpose in mind.

There has been one, or perhaps two, cars built in this country that roughly approximated the Volvo 164E's size and shape: the 1960 Falcon and the 1967 Valiant, but instead of being developed and refined essentially as they were, they were swept away by the Bigger Is Better syndrome. With the dawning of an era of "small cars," we might see such sensible sizes again in a few years.

Meanwhile, Volvo's ready. — *John Ethridge*



## VOLVO 164E SEDAN

### SPECIFICATIONS AS TESTED

Engine	182 cu in. OHV 6
Bore & stroke	3.50 x 3.15 ins.
Compression ratio	8.7:1
Horsepower	138 (SAE net) at 5500 rpm
Torque	154 lbs-ft at 3500 rpm
Transmission	3-speed automatic
Steering	power assisted cam and roller 3.7 turns lock-to-lock
Turning circle	34 ft curb-to-curb
Brakes	4-wheel disc
Suspension	control arms and coil, front live axle, control arms and coil, rear
Tires	175SR-15 radial
Dimensions (ins.):	
Wheelbase	107.0
Length	192.3
Width	67.1
Front track	53.1
Rear track	53.1
Ground clearance	7.1
Height	56.5
Weight	3080 lbs
Capacities:	
Fuel	15.5 gals
Oil	6.3 qts
Coolant	13.0 qts
Trunk	23 cu ft

### PERFORMANCE AND MAINTENANCE

Acceleration:	Gears:
0-30 mph	4.6 secs, 1st
0-45 mph	8.3 secs, 1st
0-60 mph	12.3 secs, 1st, 2nd
0-75 mph	18.7 secs, 1st, 3rd
0-1/4 mile	18.97 secs at 75.5 mph 1st, 3rd
Top speed (est)	106 mph
Stop from 60 mph	154 ft
Average economy (city)	16.6 mpg
Average economy (country)	20.8 mpg
Fuel required	regular
Oil change (mos/miles)	-/3,000
Lubrication (mos/miles)	-/3,000 (check)
Warranty (mos/miles)	-/12,000
Type tools	metric
U.S. Dealers	350