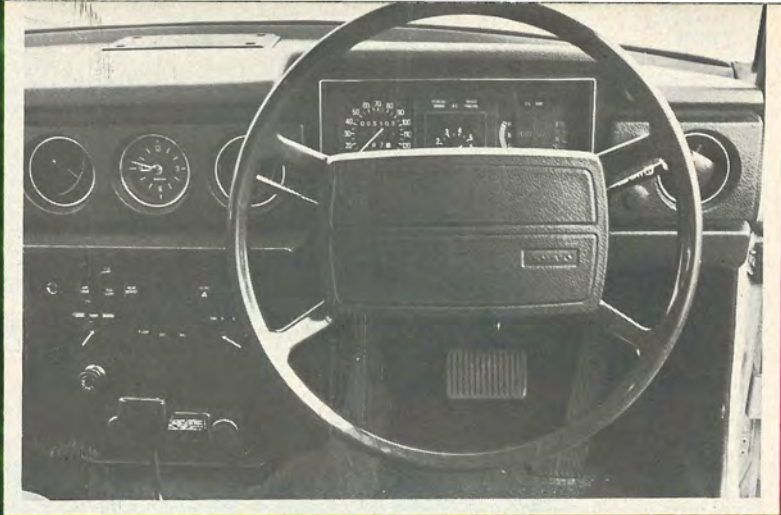




# **VOLVO 164E**

## **The Swift Swede**





## wheels road test



**Right now Volvo is the most wanted car in Australia . . . the reasons are not hard to find but sometimes it is difficult to decide where reality begins and legend ends.**

RIGHTLY OR WRONGLY, Volvo is regarded as the proof that conventional cars can be engineered to safety standards way beyond the average car.

A positive approach to safety in advertising over a long term, plus a subtle image building process, is now beginning to pay off. Volvo sales have climbed dramatically over the past three years, its share of the above \$4000 market growing from eight percent to 23 percent in that time. Today you can't walk in off the street and expect to drive away from a showroom in a

shiny new Volvo.

To the people who buy Volvo the name is synonymous with quality, comfort and reliability, but above all safety.

Whether safety really does sell cars is a questionable point if you are talking across the board, but there is no doubt in the minds of both Volvo and Mercedes-Benz executives that in their respective categories safety is a foremost consideration among their customers.

As Volvo has grown in size and success in Australia, however, the

knockers of the Volvo product have increased. They admire the way in which the car is marketed and how the name has developed a mystic which doesn't quite compare with "Mercedes-Benz" but is becoming close to the next best thing. But viewed as a "car" and not an "image", they can find plenty of things which are sub-standard.

While Volvo was still a minor force on the local market the knockers ignored the marque but as it began to eat into the highly profitable above \$4000 segment the criticisms began.

And in some areas the critical comments are valid. Volvo counter this effectively simply by pointing out the advantages of the boxy Volvo body and its apparently inherent reliability but especially the superior finish and comfort, both of which have been engineer-







# VOLVO 164E

## The Swift Swede

ed to be obvious to a casual observer.

Opposition engineers talk in terms of "cost effectiveness" and "over-engineering" when questioned on the Volvo safety features. They wonder if more time shouldn't have been spent developing new and improved engines and suspension systems.

While the 140 series has been the volume seller it is the six cylinder 164E which has shown the greatest percentage gain in the past 12 months. When fuel injection was introduced last year it gave the Volvo flagship just the lift it needed to counter the high performance levels of the local V8s and made it highly competitive with European cars in its around \$8000 price category.

The latest model carries this development a stage further with the updated interior, which arrived across the board on the 1973 range, plus various minor mechanical modifications.

There is nothing really exotic — apart from the fuel injection — about the specification of the 164E. It's a

*Left: Body heels over as 164E powers through tight corner in understeer. Power steering provides plenty of road feel.*

*Below Left: Interior is luxurious with genuine leather upholstery. Dashboard is all-new for 1973 models and optional air conditioner is fully integrated.*



Holden-sized, four-door sedan (although the wheelbase is four inches shorter at 107 inches so there is more overhang front and rear), powered by a 3-litre ohv six cylinder engine producing 175 bhp. It has a conventional Holden style suspension and four wheel disc brakes and the styling has been around in basic form since 1967 so there must surely be a new Volvo body on the way. This will probably come with the new V6 engine which is being developed in conjunction with Renault and Peugeot.

If the body isn't especially pretty — particularly on the 164E with its traditional English style grille — it is practical with a huge boot, tall cabin with large glass areas and sit-up seats

*Fuel injection gives 3-litre, ohv Volvo six cylinder engine the necessary power and torque to be totally competitive with even small V8s. Air conditioning was fitted to test car.*

which make the most of the available space.

The interior is a tasteful exercise in subdued luxury with big leather covered lounge room style seats and a black plastic dashboard. It is in the interior that the price can easily be justified over local cars with a similar specification. Here — and out on the road where the Volvo is capable of transporting five people in comfort over long distances in a fashion which is beyond most local cars.

*(Continued on page 95)*

Did you ever think, What the hell am I doing in a car like this? Did you? Right now in Australia is one of the best examples of what is happening to cars and why ...

## THE NAME'S VOLVO

By Peter Burden

VOLVO COULD BE one of the great oversold names on this market. Every time it's mentioned a good many of us cringe and mentally run for cover.

On the basis of new cars sold here it represents a mere 0.6 percent of the total market.

On the basis of funds employed its \$20 million commitment in Australia, while a largish figure in itself, is about a fifth of that of Leyland Australia and very small beer indeed in comparison with GMH and Ford which account for around \$800 million between them.

Volvo is notable for its trendy

advertising, among the best local automotive advertising, its firm stand on safety, and a very high reputation for vehicle longevity. We all nod. The Volvo 140 series of cars are nice, albeit in a somewhat heavy and Teutonic way, and we all accept this. Even the pricy Volvo 164 is effective.

But is any of this important? After all we are talking about 3000 Volvos sold last year in a vehicle market of 500,000.

The brief answer is that it is important.

The acceptability of Volvo on this

### "WHICH?" SURVEY OF CAR RELIABILITY

	Days off road	% with no loss of use	% with no major faults	% who would buy again
Volvo 144	1	70	79	78
Saab 99	1	62	75	84
Volvo 164	3	48	80	73
Rover 2000	2	53	66	62
Rover 3500	3	44	64	62
Triumph 2000	3	44	54	59
Jaguar XJ6	6	36	52	76
NSU Ro80	6	30	60	57
Triumph 2.5 PI Mk II	6	26	46	48

market, the influence that it has had on vehicle design that is out of all proportion to the numbers sold, and the way in which the company's aims have come to reinforce social concern with the environment and conservation of resources is an astonishing performance.

It is possible to name several exceptions, but by and large vehicle manufacturers the world over have crashed headlong against a stony wall of consumer revolt. The shape of the car as we know it is changing and its very role is being questioned.

*(Continued on page 92)*



## VOLVO 164E

Continued from page 49

This is not to say the 164E is equal to the bigger six cylinder BMWs, Jags and Mercedes of this world. It is not, but then neither is the price \$10,000.

Perhaps the ride is the best example of the Volvo's lack of real sophistication. The 164E is comfortable, astonishing so in rough conditions taken at speed but it lacks the super smooth bump absorption of the best all independent suspensions and at low speeds tends to be a little too susceptible to reacting harshly to bumps. And where the 164E is a very quiet car by Volvo standards it can't be compared with the XJ6 or even the Peugeot 504.

A solid 1800 mile workout over a wide variety of conditions showed up the many Volvo virtues, but also proved that many of the old problems still exist.

The accelerator pedal, for instance, is still far too heavy. After a long stretch behind the wheel the driver's right leg gets dreadfully tired of pushing down hard on the big pedal. And there seems little need for the heavy pedal — Volvo dealers long ago discovered a weaker return spring provided an instant cure.

In fact most of our criticisms of the car relate to driver comfort. Wider wheels and radial ply tyres have improved the car's roadholding and handling, but in tight corners and when switching from lock to lock quickly there is still a distinct tendency to body lurch that has the driver hanging on to the steering wheel. On fast open bends the car settles down more easily. The body roll is controlled and the car tracks straight with some understeer which never reaches the strong proportions present on sharper corners.

Wind roar from the front quarter vents becomes annoying above 60 mph and gets increasingly loud as speeds rise above that, which is a pity because once the engine settles down to constant cruising it is fairly quiet. The Olympic Reflex radials

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provide a good grip on wet roads, but produce some tyre rumble on coarse bitumen surfaces.

And while the genuine leather covered seats smell fine the driver finds his shoulders slide from side to side although, surprisingly, his rear stays put on the cushion.

Volvo included the optional (at a stiff \$595), integrated air conditioning unit on the test 164E and it is being ordered on almost half of the 164Es sold. Two months ago in our comparison test between the Peugeot 504 FI and Volvo 144S we said it was the best unit, outside of a Jensen, we had discovered.

Now we are not so sure. In warm or hot weather the comment is valid but in colder temperatures the air conditioning is far from perfect. While the unit does provide air conditioned hot air — that is with the moisture taken out of the air — the interior still becomes unduly stuffy because none of the four dashboard vents is reserved for cool air.

So the ultimate combination of fresh air to the face and warm air to the feet is just not possible and on a long trip this could be dangerous. The other problem is a lack of temperature adjustment between the critical cool/warm positions. On the test car it was difficult to get anything which wasn't hot or cool.

Switching off the air conditioning, to run just the heater, produces the same lack of versatility although on the cars without air conditioning two of the dashboard vents are supposed to supply cool air while these directed to the floor are pouring hot air into the cabin.

It seems the air conditioner is superb in summer when you want only cold air, but not quite as good in the winter. However, the unit is beautifully integrated into the interior console and even has a recirculating device so that you can shut off outside air and, by using the fan, still get air at the desired temperature.

The new dashboard has a balanced and modern look about it. Volvo has at last thrown away the old style, color band speedo and in its place is a neat circular speedo with a small tachometer and temperature and fuel gauge plus an accurate clock. Readout is easy if you are tall but shorter drivers will find the large steering wheel boss does get in the way.

The radio is now within easy reach of the driver, which is a significant safety feature and map pockets are fitted on both front doors together with combined door pulls and armrests which are a little too hard to be really comfortable for the driver's elbow over a long trip.

A driver's front bucket seat, which is adjustable for height as well as for the more normal rake and length, provides a comfortable position for most people but especially so for tall drivers.

The driver's seat on the 164E goes back further than the same seat on the four cylinder range, apparently because it has the height adjustment, and this allows tall drivers to get well back from the wheel. The now small diameter steering wheel with four spokes, is almost vertical and combined with the excellent power steering, which is standard on the 164E, goes

a long way to reducing driver fatigue. The steering is progressive and imparts a fine degree of feel to the driver and yet is light enough for easy parking without reaching the ludicrous extremes of some American cars.

Volvo's inertia reel seat belts simply mean the driver and front seat passenger pull the clip away from the door pillar, where it is stored and to which it returns automatically upon release, across the body and then plug it into the fixed central locking location between the front seats. It is a pity all seat belts aren't as easy to use or as effective.

Performance is impressive. When the fuel injection version arrived Volvo Australia took the opportunity to lower the overall gearing to really give the 164E an impressive straight line acceleration away from the lights. Now it sprints to 60 mph in 10 seconds flat and goes on to 90 mph in 24.6 seconds, which is excellent for a 3-litre six pulling such a large car.

The standing quarter mile takes 17.4 seconds if you leave the transmission in Drive but this time can be lowered to 17.0 seconds if you use the gearbox manually and run the car to the 6000 rpm redline. In Drive the car changes up at 5100 rpm from first to second and then at 5600 rpm from second to third so it pays to go higher if you really must have the last ounce of performance available.

An effective kickdown which gives the driver control over the transmission through the accelerator pedal means most of this performance is available instantly. Passing is quick with the time spent on the wrong side of the road kept to a minimum if you kickdown to second. Changes are fairly smooth and are noticed more because of the drop in engine revs than any particular thump or jerk.

The centrally mounted selector lever allows the transmission to be pulled back into second without depressing the knob on top of the lever and this can be used effectively to hold second gear in a corner or down a steep hill.

Fuel consumption varies considerably. Driven hard with long stretches of high speed cruising the 164E returned 15.0 mpg, but commuting around the suburbs raised this to a best of 20.0 mpg. On average we achieved between 17.0 to 18.0 mpg and this would seem to be the figure most owners could expect from a 164E with air conditioning. We would expect a 10 percent improvement on cars without air.

Long distance cruising shows up the limited capacity of the petrol tank. At 12.8 gallons it allows a safe touring range of under 200 miles which just isn't good enough considering the Volvo's ability to dispense with such distances.

For years now Volvo brakes have been held up as being as close to perfect as you are likely to find on a relatively cheap car. Certainly they are very good with a progressive pedal with plenty of feel and can haul the car down from high speeds remarkably quickly. But bringing the car to a final halt requires deft control by the driver or the car will nose dive excessively over the last few feet and pull up sharply with a jerk.

And with the soft disc pads fitted to get rid of any trace of brake squeal the brakes can be made to fade dramatically to the point that smoke pours out from under the front wheel arches and pedal travel increases almost to the floor. Three or four long stops in quick succession from even 40 mph are enough to induce heavy fade.

Thankfully the recovery rate is very good, indeed 200 yards after having the pedal close to the floor the brakes seemed to work just as effectively as before any fade appeared.

Volvo's 164E is a much better car than the four cylinder models and in its class, somewhere between the local luxury cars and the imported \$10,000 machines, it has little competition. Ford's entry into the market with the new LTD is certain to grab a few customers away from the Swede, but really they are two different types of car and will be considered as such by the customers.

The Volvo is a practical luxury car in an age of consumerism and that just has to be a strong selling point. \*



*Tail of 164E is identical to cheaper four cylinder model, extra price would seem to indicate greater styling differences would be desirable.*



# wheels road test technical details

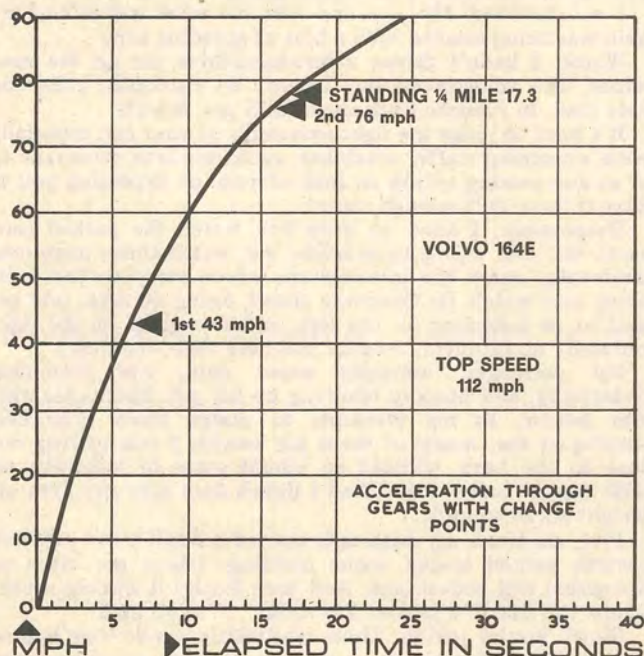
## VOLVO 164E

MAKE ..... VOLVO  
MODEL ..... 164E '73 Model  
BODY TYPE ..... Four-door sedan  
PRICE ..... \$7550  
OPTIONS ..... Radio, air conditioning, automatic transmission  
COLOR ..... Yellow  
MILEAGE START ..... 1804  
MILEAGE FINISH ..... 5421  
WEIGHT ..... (1400 kg) 3087 lb  
FUEL CONSUMPTION:  
Overall ..... (5.9 kpl) 16.9 mpg  
Cruising ..... (5.3-7.1 kpl) 15-20 mpg  
TEST CONDITIONS:  
Weather ..... Fine, cool  
Surface ..... Castlereagh Drag Strip  
Load ..... Two persons  
Fuel ..... Super  
SPEEDOMETER ERROR:  
Indicated mph      30    40    50    60    70    80    90  
                         26    36    46    57    66    76    86

### PERFORMANCE

Piston speed at max bhp ..... (110 m/m) 3642 ft/min  
Top gear mph per 1000 rpm ..... (31.54 kph) 19.6  
Engine rpm at max speed ..... 5800  
Lbs (laden) per gross bhp (power-to-weight) ..... (7.98 kg) 17.6  
MAXIMUM SPEEDS:  
Fastest run ..... (181.8 kph) 113 mph  
Average of all runs ..... (180.2 kph) 112 mph  
Speedometer indication, fastest run ..... (186.6 kph) 116 mph  
IN GEARS:

	Drive		Held	
1st	43 mph	(5100 rpm)	50 mph	(6000 rpm)
2nd	76 mph	(5600 rpm)	82 mph	(6000 rpm)
3rd	113 mph	(181.8 kph)	—	(5800 rpm)



ACCELERATION (through gears):  
0-30 mph ..... 3.8 sec  
0-40 mph ..... 5.3 sec  
0-50 mph ..... 7.5 sec  
0-60 mph ..... 10.0 sec  
0-70 mph ..... 13.2 sec  
0-80 mph ..... 17.8 sec  
0-90 mph ..... 24.6 sec  
Kickdown  
20-40 mph ..... 3.5 sec  
30-50 mph ..... 3.7 sec  
40-60 mph ..... 4.8 sec  
50-70 mph ..... 6.1 sec  
60-80 mph ..... 7.0 sec

STANDING QUARTER MILE:  
Fastest run ..... (held) 17.0 sec  
Average all runs ..... 17.3 sec

### SPECIFICATIONS

ENGINE:  
Cylinders ..... Six in line  
Bore and stroke ..... (3.49 in. x 3.14 in.) 88.9 mm x 80.0 mm  
Cubic capacity ..... (181.5 cu in.) 2978 cc  
Compression ratio ..... 10.0 to 1  
Valves ..... OHV  
Carburettor ..... Bosch electronic fuel injection  
Fuel pump ..... Electric  
Oil filter ..... Full flow  
Power at rpm ..... 175 bhp at 5800 rpm  
Torque at rpm ..... 170 lb/ft at 2500 rpm  
TRANSMISSION:  
Type ..... Three speed automatic  
Gear lever location ..... Floor  
RATIO:

	Gearbox	Overall	mph per 1000 rpm	(kph)
1st	2.39	8.91	8.2	(13.1)
2nd	1.45	5.40	13.5	(21.7)
3rd	1.00	3.73	19.6	(31.5)
Final drive	3.73			

CHASSIS AND RUNNING GEAR:  
Construction ..... Unitary  
Suspension front ..... Independent, coil springs upper and lower wishbones, anti roll bar  
Suspension rear ..... Live axle, trailing arms and torque rods and coil springs  
Shock absorbers ..... Telescopic  
Steering type ..... Power assisted worm and roller  
Turns lock to lock ..... 3.7  
Turning circle ..... (9.6 m) 31.6 ft  
Steering wheel diameter ..... (419 mm) 16.5 in.  
Brakes type ..... Disc/disc  
Dimensions ..... Disc (271.7 mm) 10.7 in. (294.6 mm) 11.6 in. diameter rear

DIMENSIONS:  
Wheelbase ..... (272 mm) 107.1 in.  
Track front ..... (135 mm) 53.1 in.  
Track rear ..... (135 mm) 53.1 in.  
Length ..... (470 mm) 15 ft 5.6 in.  
Width ..... (174 mm) 5 ft 8.3 in.  
Height ..... (144 mm) 4 ft 8.7 in.  
Fuel tank capacity ..... (58 litres) 12.75 gallons  
TYRES:  
Size ..... 165 HR15  
Pressures ..... 30 psi front/28 psi rear  
Make on test car ..... Olympic reflex radial  
GROUND CLEARANCE:  
Registered ..... (18 cm) 7.1 in.