

VOLVO PV-544

*If thou shouldst lay up even a little upon a little,
and shouldst do this often,
soon would even this become great.*-Hesiod, 720 B.C.



A TIDAL WAVE of cars from across the Atlantic came to our shores about 7 years ago, and in the full flowering of American enthusiasm for the imports, it was difficult to spot those destined to survive. However, few people would have selected the Volvo, a scaled-down 1948 Ford with a smallish 4-cyl engine, as a likely candidate. The Volvo was too dated in appearance, and embodied little in interesting technical features. Far-out engineering was getting most of the play in those days (as is often true now) and the completely straightforward Volvo drew little notice. Nevertheless, after the tides receded in 1960, Volvo was among those which had found a solid and satisfied following of American buyers.

In its original form, the Volvo had the same "1948 Ford bodywork" of the present 544, but was somewhat different

mechanically. The early model had a 3-speed transmission and a sports-tuned version of Volvo's old PV-series 3-mainbearing engine, which had bore and stroke dimensions of 2.95 and 3.15 in., and a displacement of 1414 cc.

The new engine, carrying the designation "B-18," also has 4 cyl and a stroke of 3.15 in., just like its immediate ancestor, but that is where the resemblance stops. The B-18 engine has a 5-mainbearing crankshaft, with bearings that are remarkably generous in size; it is strong enough to withstand far more than is being asked of it at present. The block is much roomier than before, and at the present bore size of 3.31 in. there is no crowding. Water completely surrounds each cylinder, and that minimizes thermal distortion. An interesting feature carried over from previous Volvo engines is thermosiphon cooling for the cylinder block. This gives a very rapid warm-up around the cylinders, and that reduces bore wear-which is heaviest when the cylinder-wall temperature is below the dew-point of the corrosive vapors generated in the combustion process.

The cylinder head is blessed with valves and porting that would do justice to a racing engine. All of the ports are sep-

arate, and the inlets have inserted rings that perfectly match the manifolding to the ports. The engine is equipped with a pair of SU carburetors. The compression ratio is only 8.5:1, but-oddly enough-at the specified spark setting, the engine would not run on regular-grade fuels without some ping.

Prior to the change of engines, Volvo had redesigned the old 3-speed transmission into an all-synchro, 4-speed unit: a change that was much welcomed. However, the extra gear was crowded in at some expense in strength, and there were some instances where owner exuberance resulted in the need for repairs. Concurrently with the B-18 engine, Volvo designed and developed an all-new 4-speed transmission with a greater torque capacity and an absolutely unbeatable synchro-mesh on all forward gears. The gear lever, a long stalk growing up out of the transmission tunnel and inclined back to bring the knob within easy reach, is unchanged. It would be nice (and much appreciated by all of us here) if Volvo would use the transmission extension provided on the P-1800 to bring the lever mounting back nearer the driver, thereby shortening the lever itself, and reducing the "throw" required.

Only detail changes, and exceedingly minor ones at that, have been made in the 544's chassis since its introduction. The front wheels are carried on unequal-length A-arms, and a very light and precise cam-and-roller steering is used. The rear axle, which has hypoid-type gears, is located by trailing links and a transverse track rod. Coil springs and telescopic dampers are used all around.

All of the other Volvos have gone over to disc brakes at the front wheels, but the 544 retains 9-in. drum brakes. Consequently, the 544's braking performance is not as good as the others', but it is still quite good. Our braking tests produced a strong odor of scorched lining, but no perceptible fade.

One of the more attractive features of the 544 is its sturdy and rattle-free unit-constructed body. Window area is a bit limited, as the posts are quite thick, and the styling is neither contemporary nor classic-beautiful, but the use of heavy-gauge sheet steel, and a lot of it, renders the 544 nearly indestructible.

In the interest of making the passengers as bash-resistant as the car, Volvo has developed a seat-belt that is one of the best. It is a strap that starts on the floor, leads across the lap



to a latch-fitting on the drive tunnel, then goes up and across the chest, and then back to an anchor on the window post.

On the new 544, the instrumentation has been changed to bring it more into line with modern practice, and padding has been added along the top of the dash. The speedometer is now one of those creeping horizontal-line contrivances, and while it may look better than the previous round instrument, it is by no means as readable. The end of the thermometer line is cut on a sharp angle, and one never knows whether to read the point, middle or heel of the slanted end. In checking speedometer error, we used the middle; the error was moderate at that point.

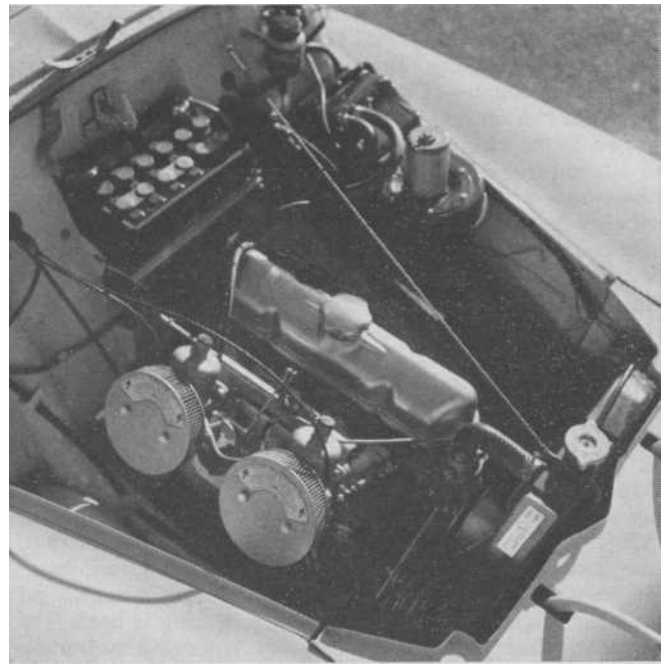
The circa-1948 bodywork of the 544 makes for a rather

The Volvo's lines are dated, but not entirely unattractive.





Nicely grouped and clearly labeled controls and instruments.



Accessibility is a requirement that has been fully met.

VOLVO PV-544

narrow interior, but there is adequate shoulder room, and a *lot* of head room. This is one of the few imports that one can drive while wearing a hat-if that matters. Leg room has been supplied unstintingly, but the area around the pedals is a trifle narrow for comfort. The seats are well contoured, and the placement of the controls, relative to the seats, makes this rather a nice car for long trips--much better, in fact, than many another car with nominally more posh interior. The upholstery is all done in a durable and rich-looking polyvinyl plastic, and there are a lot of nice small touches: such as an ash tray at each end of the back seat and back windows that pivot out for ventilation. Everything, except a radio, is included in the basic price of the car-and that includes a venti-

Rather limited visibility astern.



lation and heating system that really does the job as it should.

Trunk room is good by import standards; fair as compared to most U.S.-built compacts: adequate, in any case, for the average family on the average trip (as any married man knows, there can never be *enough* space). At the other end of the car, room has been provided around the engine to make routine service less bother than is so often the case.

Above all, the Volvo 544 is a practical car. Its relatively light weight and small overall size, combined with what is really a very good chassis, make it a pleasure to drive, but its most valuable attributes are economy and durability. True, it cannot match the real midgets for mileage, but it does not have their lackluster performance or limited load capacity, either. If the Volvo has a single most-attractive feature, it is sturdiness and overall quality. There is nothing slap-dash or flimsy anywhere on the car, and this is, in our opinion, more than enough to compensate for any lack of sheer glamour.

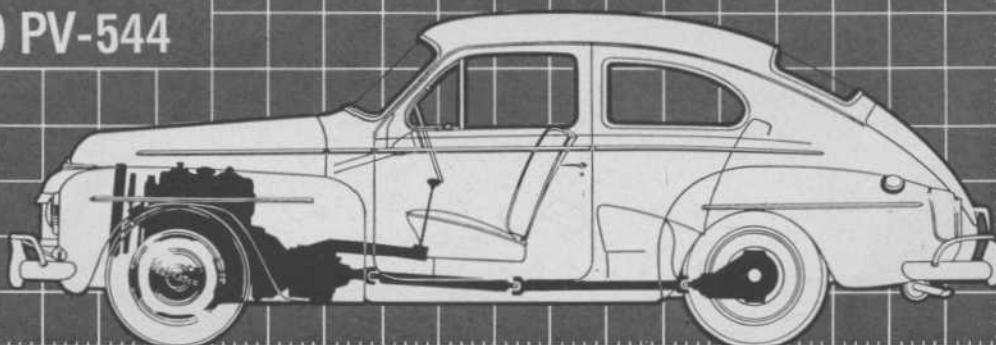
Trunk space is well provided.





ROAD TEST

VOLVO PV-544



SCALE: 1/4" DIVISIONS

DIMENSIONS

Wheelbase, in.	102.5
Tread, f and r	51.0/51.7
Over-all length, in.	175.0
width	62.5
height	61.5
equivalent vol, cu ft.	390
Frontal area, sq ft.	21.4
Ground clearance, in.	7.5
Steering ratio, o/a	n.a.
turns, lock to lock	3.2
turning circle, ft.	32
Hip room, front	2 x 20.7
Hip room, rear	51.5
Pedal to seat back, max.	40.0
Floor to ground	11.7

CALCULATED DATA

Lb/hp (test wt)	27.8
Cu ft/ton mile	82.1
Mph/1000 rpm (4th)	18.4
Engine revs/mile	3270
Piston travel, ft/mile	1720
Rpm @ 2500 ft/min	4760
equivalent mph	87
R&T wear index	56.2

SPECIFICATIONS

List price	\$2330
Curb weight, lb	2160
Test weight	2500
distribution, %	52/48
Tire size	5.90-15
Brake swept area	n.a.
Engine type	4-cyl, ohv
Bore & stroke	3.31 x 3.15
Displacement, cc	1780
cu in.	108.5
Compression ratio	8.5
Bhp @ rpm	90 @ 5000
equivalent mph	92
Torque, lb-ft.	105 @ 3500
equivalent mph	64

GEAR RATIOS

4th (1.00)	4.10
3rd (1.36)	5.57
2nd (1.99)	8.16
1st (3.13)	12.8

SPEEDOMETER ERROR

30 mph	actual, 29.0
60 mph	57.9

PERFORMANCE

Top speed (4th), mph	92
Shifts, rpm-mph	
3rd (5500)	74
2nd (5500)	51
1st (5600)	33

FUEL CONSUMPTION

Normal range, mpg. 25-29

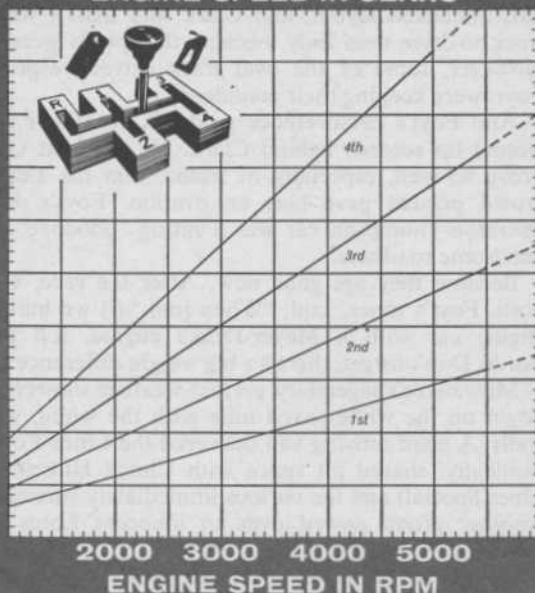
ACCELERATION

0-30 mph, sec.	4.3
0-40	6.8
0-50	9.6
0-60	14.1
0-70	19.1
0-80	27.0
0-100	
Standing 1/4 mile	19.1
speed at end	70

TAPLEY DATA

4th, maximum gradient, %	8.4
3rd	12.6
2nd	19.3
Total drag at 60 mph, lb.	150

ENGINE SPEED IN GEARS



ACCELERATION & COASTING

