VOLVO 242DL

Volvo's new 4-cylinder gets a chance to prove itself

PHOTOS BY JOHN LAMM

WELCOME TO PART two of a 10-month-old road test. The first half was printed last July with the test of the 1975 Volvo 242GL, in which we offered our opinion of the closest thing to a new Volvo Gothenburg has produced since the 140 series debuted in 1966. Only the basic 140 sheet metal from the bulkhead rearward remained, with the front end design now closely approximating that on Volvo's safety car. Underneath was a MacPherson strut front suspension and rack-and-pinion steering and even the rear suspension had been revised. Inside the dash and instrument panels were new, as were the seats and interior trim.

That was an extensive updating from a company that thinks in decades and still uses odometers with six figures. Yet they left out what was perhaps the most exciting part of the new 240 series—the engine. Still up front, looking slightly lost in the now-larger engine compartment (thanks to the strut suspension) was "the old four," as the overhead valve B20 was affectionately known. We didn't really mind the engine, since there are few pieces of hardware in the automotive business that are as old as we are, so we felt a certain kinship to the 30-year-old solid-iron 4-cylinder.

However, the old girl was, as they say, a bit long of tooth for 1976 . . . to say nothing of noisy and slow. Just meeting 1975 emissions regs had drained another 11 hp from the Federal B20 and as Volvo added still more options and weight, the end became inevitable. But being conservative, Volvo also figured that a company that touts its reliability shouldn't rush into an important market like America with an untried engine, so for 1975 they made the new 4-cylinder a European exclusive and gave us the older engine.

All that's resolved now and with the new B21F four, the Volvo transformation is complete. To refresh your memory, the new powerplant has an iron block (though the bottom end is similar to the old engine), capped with an aluminum crossflow head. The head contains the cogbelt-driven camshaft, which works the valves directly through tappet buckets. The same basic Bosch continuous-flow injection system the B20 had is continued on the B21F and to allow sufficient room for it, the engine is canted about 15 degrees to the right. At 2127 cc, with a compression ratio of 8.5:1, the B21F manages 102 hp at 5200 rpm (99 at 5200 rpm in California with a catalyst) with 114 lb-ft of torque for all U.S. engines. With the B21F comes a new manual transmission (M46) with the option of the electric overdrive which has a shift lever-mounted switch as in 1975.

Most important, though, is the feeling the engine adds to the Volvo line, which seemed to be drowning in corporate conservatism. The car has some flair and is not just getting by anymore. The 240s are able to get up a freeway ramp with authority and not run out of breath too early. We aren't back

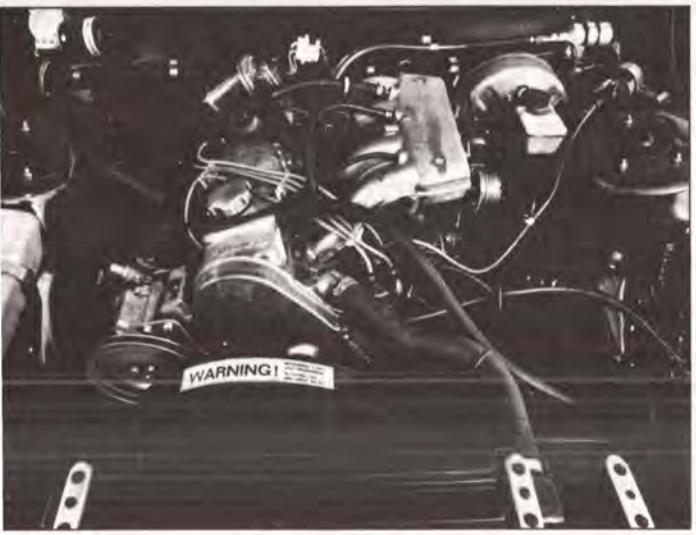
to the days of the 122S, but at least there is a little Viking blood back in the cars.

Next most important improvement is acceleration, the new car beating last year's 0-60 mph time of 14.2 sec with a clocking of 13.0 flat. The 1976 quarter-mile time undercuts the 1975 mark by 2.3 sec, with a 18.8-sec timing. Last year's car, by the way, had a final drive ratio of 4.30:1, while our new California car had a 3.91:1 gear combined with higher numerical gear ratios for 1st and 2nd in the gearbox. You'd expect that to show in the gas mileage figures and it does, the new engine getting 21.0 mpg versus 18.5 mpg in 1975.

Now, though, the engine seems to enjoy revving, able to go right to the 6000-rpm rev limit without sounding strained. The final form of the overhead valve engine was good for about 4000 rpm and then left the impression it was about to seize. What's more, you don't have to run this to the limit in each gear since the flexibility given the B21F by its broader torque curve allows you to pick a gear and stay and not be continually thrashing about in the gearbox.

Since the aluminum keeps the weight of the new, larger engine to about that of the older iron model, the handling hasn't changed appreciably since 1975, but that had been enough of an advance over the previous year; we aren't about to complain. The car still isn't a street racer and takes a slightly ambiguous set in a hard corner, thanks to the softer springing between 1974 and 1975. Yet, the improved ride over the Volvos of the early Seventies makes it worth it.

Besides, if you care to go beyond stock, Volvo has an interesting variety of semi- or full-competition options. The 240 sedans already have anti-roll bars front and rear so they would be easy to replace and a variety of shocks are available if the standard tubes are a bit soft for you. Our test car had two extra items: a smaller, leather-wrapped GT steering wheel and



the very complete replacement instrument panel. As little frivolity as there is in the standard dash, it is sparse on instruments and this option more than makes up for it, with speedometer, tach and oil pressure, voltmeter, fuel level and temperature gauges. Oddly enough, despite their very serious appearance, both the tach and speedo weren't particularly accurate.

That was our only possible complaint about this newest Volvo. It is pleasant to report that Gothenburg has finally managed to bring the Volvos out of the Sixties and the total car is now as advanced and complete as we expect from Volvo. That metamorphosis hasn't made the cars any cheaper, but it has kept them in the tradition of the "11-Year Car" and "Drive it like you hate it." That is what the public expects from Volvo and judging by the fact that 1975 was the best year Volvo has had in the U.S., the public is willing to pay for it.

ROAD TEST RESULTS

PRICE

List price, all POE	$6995
Price as tested	$7770

GENERAL

Curb weight, lb	2915
Weight distribution (with driver), front/rear, %	51/49
Wheelbase, in.	104.0
Track, front/rear	55.9/53.1
Length	192.6
Width	67.1
Height	56.5
Fuel capacity, U.S. gal.	15.8

CHASSIS & BODY

Body/frame	unit steel
Brake system	10.3-in. discs front, 11.0-in. discs rear; vac assist
Wheels	steel disc, 14 x 5½J
Tires	Michelin X, 185SR-14
Steering type	rack & pinion, power assisted
Turns, lock-to-lock	3.5
Suspension, front/rear:	MacPherson struts, lower A-arms, coil springs, tube shocks, anti-roll bar/live axle on trailing arms & Panhard rod, coil springs, tube shocks, a-r bar

ENGINE & DRIVETRAIN

Type	sohc inline 4
Bore x stroke, mm	92.0 x 80.0
Displacement, cc/cu in.	2127/130
Compression ratio	8.5:1
Bhp @ rpm, net	99 @ 5200
Torque @ rpm, lb-ft	114 @ 2500
Transmission	4-sp manual with OD
Gear ratios: OD (0.80)	3.13:1
4th (1.00)	3.91:1
3rd (1.37)	5.36:1
2nd (2.16)	8.45:1
1st (3.71)	14.51:1
Final drive ratio	3.91:1

CALCULATED DATA

Lb/bhp (test weight)	32.8
Mph/1000 rpm (OD)	23.0
Engine revs/mi (60 mph)	2610
R&T steering index	1.13
Brake swept area, sq in./ton	258

ACCELERATION

Time to distance, sec:	
0-100 ft	3.9
0-500 ft	10.3
0-1320 ft (¼ mi)	18.8
Speed at end of ¼ mi, mph	71.5
Time to speed, sec:	
0-30 mph	4.2
0-50 mph	9.5
0-60 mph	13.0
0-70 mph	17.8
0-80 mph	26.5

SPEEDS IN GEARS

OD (4250 rpm)	98
4th (5100)	98
3rd (6000)	77
2nd (6000)	49
1st (6000)	28

FUEL ECONOMY

Normal driving, mpg	21.0

BRAKES

Minimum stopping distances, ft:	
From 60 mph	180
From 80 mph	287
Control in panic stop	very good
Pedal effort for 0.5g stop, lb	30
Fade: percent increase in pedal effort to maintain 0.5g deceleration in 6 stops from 60 mph	27
Overall brake rating	good

HANDLING

Speed on 100-ft radius, mph	31.7
Lateral acceleration, g	0.673
Speed thru 700-ft slalom, mph	53.0

INTERIOR NOISE

All noise readings in dBA:	
Constant 30 mph	60
50 mph	65
70 mph	72

SPEEDOMETER ERROR

30 mph indicated is actually	31.0
60 mph	60.0
70 mph	69.0