



CAR AND DRIVER ROAD TEST

VOLVO 1800 S

Drive it like you hate it and ten to one you'll end up loving the car we used to call the Swedish Karmann Ghia

There is a certain kind of semi-sports car that has always elicited faint praise from the automotive press, particularly the purist wing. The old Mercedes-Benz 190SL best typifies that kind of car—the sort of elegant but effete conveyance that is marvelously suited for suburban—or society—wives, but really doesn't seem to have any, well, guts.

For some reason *C/D* has often been guilty of lumping the various past versions of the Volvo 1800 into that category. Good field, no hit. The car is beautiful, very well finished, and based on components we know and love—components that, from long and arduous duty on Volvo sedans, have proved near the ultimate in sheer rock-ribbed strength and durability, if not sophistication.

Yet the car has always seemed stolid. Very Swedish, but in the by-yumpin'-yimmy, Minnesota-lumberjack stereotype, rather than in the good-design-and-exquisite-metal-allergy sense that more properly characterizes modern Sweden. A Swedish Karmann Ghia, we tended to say. After all, you can (or could, back in the Model 356 days) buy a Porsche for the same money. The car is heavy (3000 lbs.). It is conventional (4-cylinder, water-cooled front engine, rear drive, live—albeit excellently located—axle). It never seemed to promise much performance. A nice, solid GT car, we said, and dismissed it.

Cruise the new 1800 S about the boulevards—well below the new 6500-rpm red-line—and you'll never get any other impression. For this road test, we drove the 1800 a sedate 350 miles on major highways



away from New York. We also drove it a sedate 350 miles back again. Speed limits, and all that.

But in between those two sedate stints, we spent two full days of pure, plain and simple, elbows-to-the-wall bashing. We careened around narrow, back-country roads at double the speed limit, ran screaming acceleration tests and shrieking brake tests, crashed over frost heaves on seldom-tended farm roads, and generally alarmed the surrounding population (and, occasionally, our passenger). We can't recall ever giving a car such a thrashing for an ordinary road test. We also can't remember having so much sheer, uninterrupted fun with an automobile.

Maybe it's the new horsepower. The car started life as the P-1800 back in 1960, with 100 SAE horse-

power at 5500 rpm. An increase from 9:5:1 to 10:1 in compression ratio in 1964 gave eight more horsepower at 5800 rpm. Now, judicious tuning, particularly in the induction system, has raised the output to 115 at 6000 rpm. The increase doesn't do that much for acceleration times (down 1.2 seconds from 0-60), but the character of the car is subtly elevated. *If you really drive it.*

You sit in an almost-therapeutic leather-covered bucket seat (a couple of years ago Volkos had just about the worst seats in the automobile industry; now they're right in there in the running for the best), firmly anchored by the excellent 3-point Volvo seat belt. Your knees are bent comfortably—the seat is raked well back, giving a more chair-high effect than usual for a car this low in overall height. Your

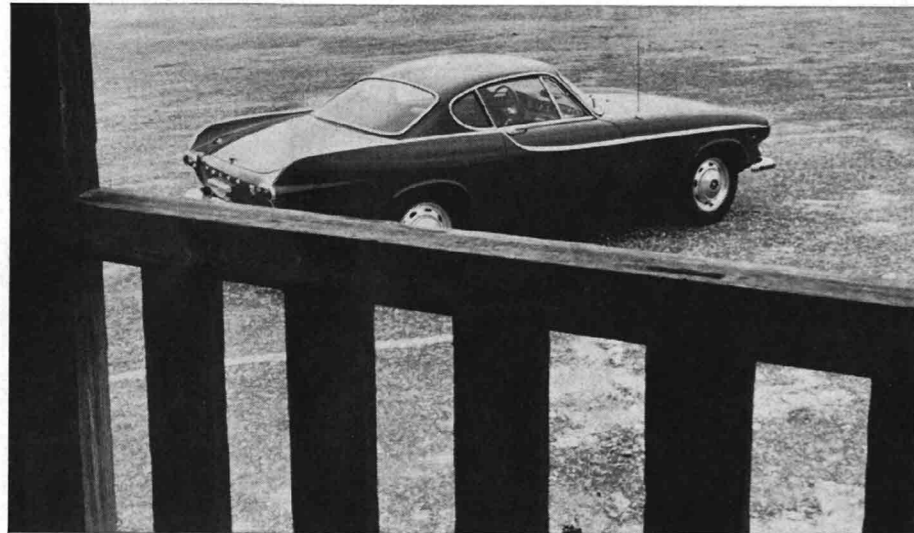
VOLVO 1800 S CONTINUED

arms are nearly straight, and you feel like Ascari already. The pedal placement is right: when the brake pedal is depressed it is on the same plane with the accelerator. The steering wheel rim is thick and solid. And right behind that rim are two stalks, one on each side, little levers that add immeasurably to the pleasure of driving fast.

The left stick is a combination turn signal and light flasher; the right is the overdrive control. Each is positioned so that you need only extend one finger from the steering wheel rim to flick it. The light flasher/turn signal control is just the thing for waking up drivers who might otherwise be startled at your rapid overtaking. The overdrive is something else again. When you are entering a fast bend just a little faster than you feel absolutely secure, and you want the reassuring support of a little more rpm and a

side loading. Nothing else happens. The car gets such fierce bite, so securely and gradually made evident to the driver, that driving it hard is a process of steadily increasing your confidence and your speed until you almost begin to feel ridiculous. You get the impression that the faster you go, the further the limit of adhesion dances on ahead of you, until finally the only factor limiting speed on winding roads is the horsepower, not the roadholding. It's a very comforting balance, particularly after trying to hurry in a big-engined American car.

The overdrive unit is worth some comment. The 1-to-1 final drive, with 4.56 rear end, gives nearly 16 mph per 1000 rpm—a fairly low ratio even for an 1800cc car. Overdrive provides a .756-to-1 final ratio, giving over 20 mph per 1000 rpm—and effortless, loafing cruising as a result. For passing, aforemen-



little more horsepower at the rear wheels, you just touch the lever, and zap, you swap a 3.45 rear axle for a 4.56. Control. Comforting noise. And that much more punch coming out the other end of the turn to boot. It's wonderful.

It is definitely in the high speed stuff that the car comes to life. At low speeds, it's a bit heavy—a combination of steering that is a trifle stiff and considerable initial understeer make you work to hurry the car along in tight turns. But get it up above 60 mph, and you get a transformation. Bend it hard into a turn, and there is neither the scruffy scrambling of tires wanting to let go, nor any refusal to go in a new direction. You simply get a moderate body lean and a gradual increase in side loading from centrifugal force. Turn the wheel more and get more

tioned flick of the overdrive control stalk downshifts to a passing gear (true fourth) that's good to 103 mph. Overdrive gives a theoretical top speed (6500 rpm) of 136 mph. The car is, in overdrive, overgeared; it won't go that fast, but it'll get far enough over the century mark to get you into trouble on almost any highway in the United States.

The only thing we could possibly ask for in addition to this transmission/overdrive set-up would be an overdrive that is operative on third gear also, to give a ratio in the neighborhood of 5.11:1. It'd be fun, but it really isn't necessary. The B 18 B engine (Volvo's designation) is blessed with plenty of torque, despite peaking at 4000 rpm. Although the spacing of the fully synchronized transmission ratios is wide

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With a few horsepower here, some judicious tuning there, the conservative men at Volvo have broken loose and improved a GT car that turns on a nickel and stops on a dime.

PHOTOGRAPHY: GENE BUTERA



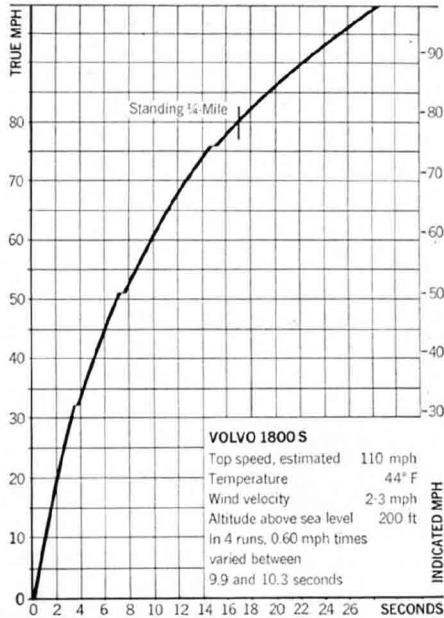
VOLVO 1800S

Importer: Volvo, Inc.
Volvo Drive
Rockleigh, New Jersey

Price as Tested: \$4190.95 East Coast POE

ACCELERATION

Zero To	Seconds
30 mph	3.3
40 mph	5.3
50 mph	7.2
60 mph	10.0
70 mph	15.5
80 mph	17.2
90 mph	22.1
100 mph	28.4
Standing ¼ mile	.80 mph in 17.2



ENGINE

Water-cooled four-in-line, cast iron block, 5 main bearings
Bore x stroke 3.313 x 3.150 in, 84.14 x 80.00 mm
Displacement 108.6 cu.in, 1780 cc
Compression ratio 10.1 to one
Carburetion Two twin-choke SU sidedraft
Valve gear Pushrod-operated overhead valves
Power (SAE) 115 bhp @ 6000 rpm
Torque 112 lbs-ft @ 4000 rpm
Specific power output 1.06 bhp per cu.in, 64.6 bhp per liter
Usable range of engine speeds 900-6500 rpm
Electrical system 12-volt, 60 amp-hr battery, 360W generator
Fuel recommended Premium
Mileage 22-26 mpg
Range on 12-gallon tank 264-312 miles

DRIVE TRAIN

Clutch 8.5-inch single dry plate
Transmission 4-speed, all synchro, plus overdrive

Gear	Ratio	Overall	mph/1000	Max rpm
Rev	3.25	14.82	-4.88	-32
1st	3.13	14.27	5.07	33
2nd	1.99	9.07	7.98	51
3rd	1.36	6.20	11.65	76
4th	1.00	4.56	15.87	103
5th	.756	3.45	20.98	110
Final drive ratio			4.56 to one	

CHASSIS

Wheelbase 96.5 in
Track F 51.8 R 51.8 in
Length 173.2 in
Width 66.9 in
Height 50.6 in
Ground Clearance 6.1 in
Curb Weight 2650 lbs
Test Weight 3061 lbs
Weight distribution front/rear 52/48%
Pounds per bhp (test weight) 26.6
Suspension F: Ind., unequal-length wishbones, coil springs, anti-sway bar
R: Rigid axle, radius arms, torque rods, Panhard rod, coil springs

Brakes F: 10.9-in. discs, R: 9-in. drums
339 sq in swept area
Steering Cam and roller
Turns, lock to lock 3.5
Turning circle 32 ft.
Tires and wheels 165-15 on 4.5J rim

CHECK LIST

ENGINE

Starting Fair
Response Good
Noise Fair
Vibration Fair

DRIVE TRAIN

Clutch action Very Good
Transmission linkage Very Good
Synchromesh action Excellent
Power-to-ground transmission Very Good

BRAKES

Response Good
Pedal pressure Good
Fade resistance Very Good
Smoothness Very Good
Directional stability Good

STEERING

Response Good
Accuracy Good
Feedback Fair
Road Feel Very Good

SUSPENSION

Harshness control Good
Roll stiffness Good
Tracking Good
Pitch control Good
Shock damping Good

CONTROLS

Location Very Good
Relationship Good
Small controls Fair

INTERIOR

Visibility Good
Instrumentation Good
Lighting Very Good
Entry/exit Fair
Front seating comfort Excellent
Front seating room Very Good
Rear seating comfort Poor
Rear seating room Poor
Storage space Fair
Wind noise Good
Road noise Good

WEATHER PROTECTION

Heater Very Good
Defroster Very Good
Ventilation Good
Weather sealing Very Good
Windshield wiper action Very Good

QUALITY CONTROL

Materials, exterior Very Good
Materials, interior Very Good
Exterior finish Very Good
Interior finish Very Good
Hardware and trim Good

GENERAL

Service accessibility Excellent
Luggage space Good
Bumper protection Fair
Exterior lighting Very Good
Resistance to crosswinds Very Good



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VOLVO 1800 S (Continued from page 60)

(particularly between 1st and 2nd), there's no annoying wait for things to get stirred up and ready to go. You don't need to keep it wound up like you have to with one of those funny little foreign cars in order to get anywhere.

The Volvo people told us we wouldn't be able to lock up the rear brakes. A new relief valve mechanism has been added that balances braking force between the front discs and the rear drums, to help prevent locking the rears as weight transfers forward during hard braking. Thus challenged, we set out to lock up the rears, even going so far as to make panic stops on ice and rain-slick surfaces. To our chagrin, we failed. We could lock up all four wheels easily enough, but we could never lock up the rear alone.

There is some nose dive under hard braking, which surprised and annoyed us at first. Thirty miles of bashing about and we'd forgotten about it. The car stops straight and true, very securely. And we failed to fade the brakes, either. But believe us, we tried.

The nose dive, combined with a fair amount of body lean during cornering, helps form one of the strongest impressions the 1800 S left us with: its Alfa-ish nature. The car is like a heavier, solider, very torquey Alfa. Other aspects contribute: the high winding, throaty-sounding 4-cylinder engine; the excellent sound-damping (in contrast to Volvo sedans, the 1800 suffers very little from road noise); and the unattractive, dumb, and distinctly vague instrument panel design. Thick, chrome bezels adorn small controls, and the speedometer's numbers are too large and too few. In this last respect, the Volvo may be even worse than the last Alfa we looked at. It's a jarring note in an otherwise tasteful interior.

While we're carping, we'd like the car better if there were a little more clearance between steering wheel and padded dash. A horn button that didn't require removing one hand from the steering wheel would be nice. The window cranks are very awkwardly located. Trunk space could be larger, although the car is so obviously a two-seater that we presume it will seldom be used on long trips in such a situation that the luggage space behind the fold-down rear seat back wouldn't be available.

Another complaint, minor but unfortunately difficult to remedy, is the angle at which the suspended clutch pedal meets the floorboard—right at

the juncture with the firewall. With pedal fully depressed, your shoe sole is horizontal, but your toe is bent back at a 45° angle. It's uncomfortable, and gives you crap-shooter's toes.

And that's it, in the complaint department. We couldn't figure out another change that would add to the livability of the car. Nice touches abound: the seats, for example, are adjustable back and forth, up and down, and in the angle of both the seat back and the seat cushion itself. And, by virtue of a screw slot adjustment in the back of the seat back, rubber bands within the seat back can be tightened or loosened at will to give a softer or harder seat back. The people from Volvo designate this infinitely variable lumbar support.

The first 6000 Volvo 1800s were assembled in England by the Jensen people. After Serial Number 6000, assembly was moved back to Sweden (although the bodies are still made in England), where the 1800s are put together on an assembly line alongside the trusty 122 S. Detail work, finish, and overall solidity of the final product have all improved markedly since Swedish assembly was started.

Those first 1800s (called the P-1800 originally) were a trifle overweight, a bit underpowered, and suffered from a drastic lack of head room. By contrast the new version is scrumptuously comfortable, and will hold its own with any GT car made, in that crucial (to Grand Touring) 60-90-mph range. What it lacks in acceleration, it makes up in controllability; what it doesn't have in brute horsepower, it more than compensates for in rugged strength and longevity. The latest Volvo 1800 S is a marvelous combination of well-tried ideas which have been lovingly executed.

And if a single feeling can sum up a car, our reaction to the 1800 is this: it has all the stability and solidity and creature comfort of a large car; it has all the controllability and verve of a small car. You don't pay the small-car price of nervous, dodgy, down-the-road handling and enervating noise levels. You don't pay the big car price of ponderousness, lack of operating economy, and wasted space. All you give up are that last, delicate, road-racing grade of handling sophistication on one hand, and that last, awe-inspiring, dragstrip grade of raw power on the other. There are some of us who can live quite happily without either one. **cd**