

# A Wolf in Sheep's Clothing: Celebrating 30 Years of the Volvo Turbo, 1981 - 2011

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By: Neville Britto



The fifties, sixties and seventies were all about performance, and Volvo was left at the back of the track. The conservatively styled Volvo 122 and 140 of the 1960's had robust, durable and virtually indestructible engines and transmissions-but they weren't taking you anywhere in a hurry! However, the North American dominated "Performance Age" came crashing down very fast. In the early 1980's Canadian and American lawmakers and institutions decided to clamp down on emission control standards, and with that the "big engine/small car" formula met its demise. Yearly emissions standards had to be met or the car was not approved by the government for production and certification. Americans literally had to adapt over night or face certain extinction, and in the performance arena did they ever!

These new standards and regulations spelled the end of American domination. The Europeans however saw this as their golden opportunity. More fuel efficient European sports cars (Porsche, BMW, Mercedes, etc.) were the new favourite. However, the 80's would belong to Sweden, and not Germany as had been anticipated. SAAB's new 99 Turbo turned the automotive industry on its head; here was a car that had the styling of a turtle shell but under the hood an aircraft inspired turbine mechanism called a turbocharger. To the average person it looked like a contraption you would find in a Popular Mechanics or a science fiction novel. To the engineers at the Volvo stables in Gothenburg, a mere 75

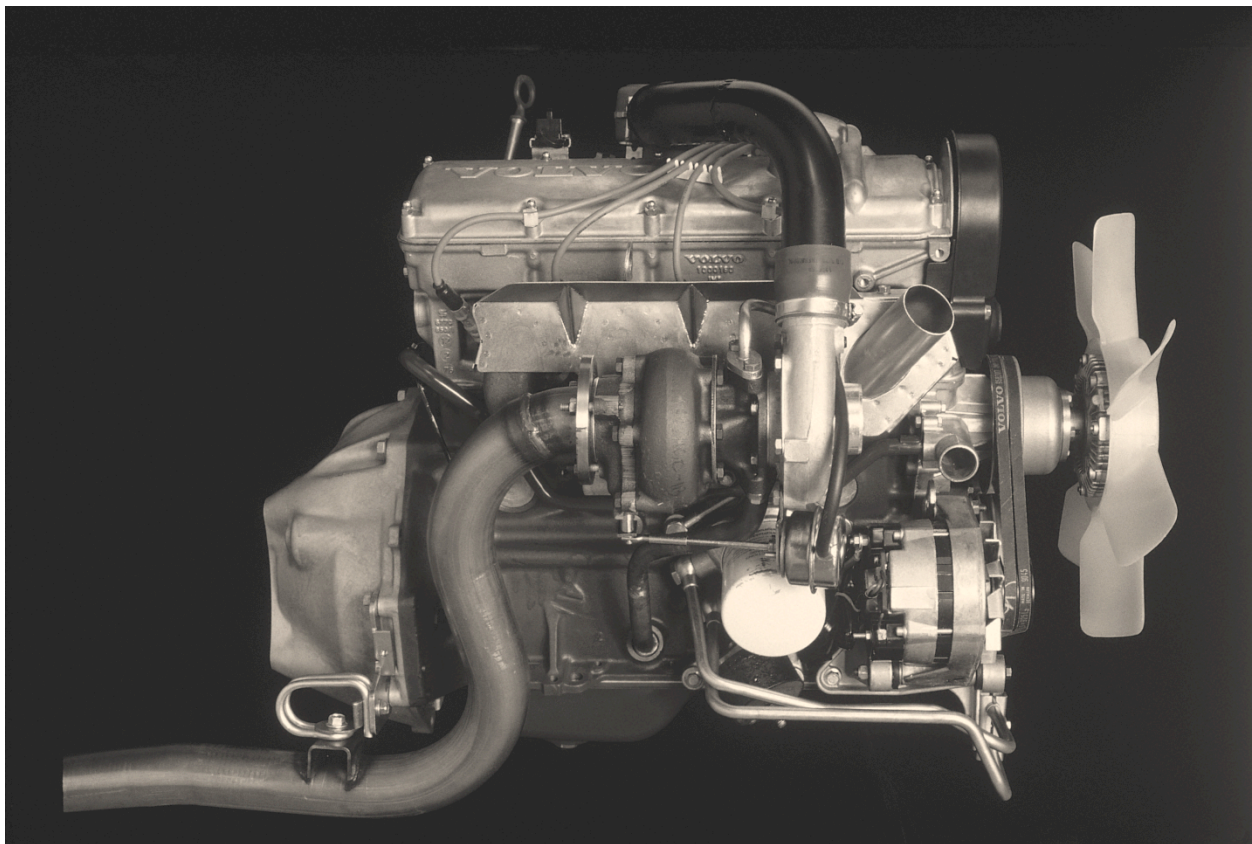
kilometres kilometres away from Saab's headquarters in Trollhättan, it would mark the beginning of a new era.

By 1980, the Volvo executives had had enough! After decades of building solid, reliable, safe, spacious but sluggish sedans and wagons it was time to shed that image and dive into the competitive sports market. Volvo had experimented with performance market offerings in the '60s and '70s with great success. Although stylish and sleek the P1800 and P1800ES were by no stretch of the imagination a performance car worthy of comparison to the seemingly steroid infused BMW's or Porsches of the day.

For Volvo to break into the market they needed two things, something reliable and something unique. The sudden surge of German and European imports posed a significant dilemma for the average consumer though. The only people that could afford these overpriced, cramped, two door, rear seat less rockets were people that on average had two or three kids. Volvo would foresee this as an "image" saving opportunity that other manufacturers had ignored altogether. Consumers wanted a car that would serve their family needs but still had staggering performance.

### **Building the Legend.**

In 1981, Volvo answered their cries. Volvo chose their most popular family sedan the 240 as the best suited candidate. The Volvo 240's robust and dependable engine was strong and offered more torque than previous models, but was still basically the traditional fuel injected pushrod four cylinder people had praised for decades (dubbed the B21F). To squeeze more power a Garrett TB03 AiResearch turbocharger was added. One question however remained. How would the stock 240 equipment compensate for the extra power?





The new engines would run at higher operating temperatures than the stock B21F, create far more torque and would need wide cavernous engine bays for all the equipment! They also had to be fairly lightweight. So back to the drawing boards the body styling and mechanical engineers went. As a result, the internal organs of the B21F engines were literally gutted and were replaced with redesigned pistons, upgraded sodium filled valves, newer gears, a performance camshaft and oil cooler to reduce the engine and turbo temperatures. To the Volvo engineering team it was just a newer, faster engine. Lurking under the unveiling covers however, would turn out to be one of the most iconic turbocharged engines in history, the B21FT (F for fuel injection, T for Turbo).

### **Unleashing the potential of the 242 GT**



Once the engine was completed, the focus shifted to the bodies. Like the engines, the bodies went through a similar trial and error process. When they were finished they had a four door 244 sedan and an early model "all looks no go" two door 242 GT that were literally stripped to the bone! To save on costs the gaudy chrome DL and GL model trim was replaced with steel and painted a sleek and stealthy flat black, the chrome grills were also replaced with black plastic equivalents. All the unnecessary stuff like the GT's front air dam was tossed in favour of a low profile air louver that forced air into the engine bay rather than away from it. The heavy earlier styled fine spoke 242 GT rims were also tossed in favour of stronger but lighter 15" Alloy "Virgo" Turbo Rims and a matching set of Pirelli P6 high speed radials. The interiors were stripped down to the bare essentials to reduce the weight and cost of the vehicle. To compensate for the added torque and horsepower units built with manual transmissions were also equipped with a redesigned clutch and pressure plate. To give the Turbos a competitive edge on the track, new shocks, sway bars and braces were added to keep all four planted and the chassis taut.

Unlike the other class rivals this new Volvo was all business! Whereas other manufactures compensated for sluggish performance with fruity "TURBO" trim decals (Saab 99), hood scoops, dual exhaust, air vents, throaty sounding mufflers, and a plethora of seemingly useless gauges capable of lighting up the Rockefeller Centre Christmas Tree this car compensated with pleasure, handling and performance! Admittedly however, under stiff acceleration it did sound a little like Chewbacca through Keith Richard's distortion pedal. In fact, if not for the discrete Turbo badges (the numeric models badges were dropped on the Turbo) on the trunk lip and grill, a slight dull whine from under the hood and the blackened grill and trim, the cars really looked like average run of the mill 244 or 242 DLs, a realism many track junkies of other brand loyalties would later find out the hard way. These oh so common scenarios gave prominence to the slogan "A wolf in sheep's clothing" as Road & Track brilliantly put it! How would all the work be received though? Would it be enough? You better believe it!

Although stripped down, the Turbos did have a fair amount of standard creature comforts. From the factory they came well stocked with air conditioning, a single Turbo boost gauge, power windows, power locks, manual crank sunroof and a heated driver's seat. A Radio was optional but the R-Sport performance and general Volvo accessory catalogues were very generous. For owners seeking a little more customization the following was available: Thule roof racks, window deflectors, a cruise control system, fog lights, rear window blinds, trunk spoiler, Momo R-Sport steering wheel, a massive assortment of AM/FM Dolby Microprocessor cassette decks, a stereo graphic equaliser and even a plastic Autoplas rear window louver.

What the engineers had hoped for was a car faster than a fully loaded Kenworth, what they got instead was a 2,900 lb, metallic paint clad fire breathing torque monster that charbroiled just about anything that crossed it! At a starting price of only \$13,600 USD (\$32,800 in 2011), half the price of a high performance BMW or Mercedes Benz, the Turbos were not only a steal but overnight success story! For the first time in its history Volvo began to dominate the North American performance market. With the performance claims and the help of a massive publicity campaign carried out by the advertising agency Scali McCabe Sloves, the Turbos were just flying off dealer lots. In fact, the demand was so great that Volvo announced that production of the new models would be carried out at three separate facilities. The iconic Torstlanda production facility would handle the majority of the units while the Ghent Belgium facility would handle a significant chunk of the export and European markets. For eager Canadian and American customers Volvo Canada's Pier 9 plant in Halifax would build a good portion of their units from unassembled complete knock-down (CKD) kits. Now you could take the kids to baseball practice while blowing the doors off a BMW on the way back, and best of all in the trusted safety of a Volvo!

### **Testing the 242**

The newly branded Turbos were popular but just how fast were they? They could have been built with gold but if Car & Driver or the other major magazines weren't impressed it might as well have been a rusted out Lada! With all the new rumblings the review gurus were eager to pit them up against the competitors and put them through the paces. Once again the Turbo did not disappoint. Although stylistically husky and rigid, Turbos were still well suited for the rigorous high performance testing. Something Volvo tuners like IPD of Portland, Oregon had been trying to tell people for years!

In 1981, with the entire car's future on the line, Volvo of North America gave the Car & Driver test team a silver 242 GLT Turbo they could literally beat the snot out of on the track! When all was said and done the test not only revealed the cars impeccable handling tweaks but the blistering acceleration 0-60mph (100km/h) time of under 9.2 seconds and a ¼ mile drag sprint of 17.2 seconds. Specification times that were not only faster than the Saab 900 Turbos it was designed to compete with but the '80



Porsche 924 S as well (0-60 in 9.7, ¼ mile in 17.3). In 1982, Volvo decided to up the ante and equipped the 245 Wagon with the killer B21FT and the “Ultimate Family Performance Car” or “Whoosh Wagon” was born. There was simply no other wagon out there that could keep up with it. Even though it was heavier, it more than happily pulled the 0-60 mph in a blistering 8.9s and the ¼ mile in 16.7s!

Other reviewers followed suit claiming the new Turbo was “A Missile” (Car & Driver), “Exemplary” (Road & Track), or (my all time favourite) “You keep hoping for a stray Saab 900 Turbo or even a BMW you can sniff out and then send scrambling to the roadside while you blow its doors in” (Motor Trend). Endorsements that were not only worth their weight in gold but also 100% all true!



## Unleashing the Beast - The Volvo Turbo and the Intercooler from Hell



However that simply wasn't good enough for the Volvo top brass; so they once again went down and yelled "Common Bjorn, Olaf, Leif and Erik! Let your hair down, stop listening to that bloody ABBA record and build us something even faster! No more of this safety and decent performance nonsense! We want to win some races!" After a few years of perfecting the art of scaring/shocking the hell out of BMW and Saab drivers, the engineers at Volvo were also getting tired of the same old hum drum game. Their response? Make it even faster and release the Volvo Turbo- from hell!

**Turbochargers generated massive amounts of heat which in turn make an engine work harder and increases strain. In order to improve efficiency a heat exchanger would be required to cool everything down.** The Excalibur came in the form of a radiator-like contraption which the engineers dubbed an IBS (Intercooler Boost System) that cooled the incoming hot air and in turn pumped out cooler air into the intake manifold. Since cooler air is denser it is easier to compress. More compression translates into more power and thus ... the Volvo from hell or the "Turbo + and/or Turbo Intercooler" (as Volvo called it) was born. With a roar that sent bone chilling fear through Porsche 928 Turbo and 944 owners and the torque infused tire squealing that sent even the healthiest of BMW drivers into cardiac arrest the Turbo Intercooler was certainly not "Uncle Dave's" Volvo! The first dealer test drive candidates probably thought it was possessed because man did it go like stink!



The testing phases of the first Volvo Turbo Intercoolers proved very revealing. The IBS system alone increased efficiency by 24%, cranked up the power a staggering 30+ bhp, sent the torque rating through the roof and slashed the 0-60 time right down to a pavement scorching 8.5 seconds (Road & Track). This proved not only to Volvo nuts but the drivers of other foreign exotics that Volvo was not playing around, nor was it the weakling of the pack anymore! In a straight line 0-60 and ¼ mile acceleration test the new Turbo Intercooler would more than happily dust the performance breed **Pontiac** (Firebird Trans-Am), **Chevrolet** (Camaro Z28/Berlinetta/IROC-Z, Monte Carlo SS, Corvette), **Ford** (Thunderbird Turbo), **Datsun** (280ZX), **Porsche** (924 Turbo, 944), **BMW** (318i,320i,325e,524TD,528), **Jaguar** (XJ-S HE V-12, XJ6), **Audi** (4000S, 5000 Turbo), **Mercedes Benz** (380SL, 580SEC), **Volkswagen** (Golf GTI Mk.1), and would effortlessly leave humiliated Orthodontists and their “reasonably priced” blood red **Ferrari** Mondail 8s in a cloud of tire smoke! Not surprisingly, it was also 3-4 seconds faster than the entire Saab line-up. As if the shame of losing to a “Volvo” was not enough, just to salt the wounds you could do all that with two child seats, a dog and an antique dresser in the back if you had a Turbo Intercooler station wagon!



While the executives and engineers decided that the new Turbo with IBS would be standard equipment for the 1984 and 1985 model years they decided instead to gradually introduce them in the tail end of 1983. However, there was one problem! Hundreds of cars were already or waiting to be delivered to customers that didn't have the new performance boosting upgrades and a mild uproar ensued. As the IBS layout only really consisted of a few minor tweaks to the existing engine, Volvo decided to release an R-Sport Competition Service accessory upgrade kit through their North American dealer network to retrofit the back dated Turbos.

For approximately \$595 the local dealer would shoehorn in an intercooler in front of the radiator, link up all the new hoses and slap on a snazzy little chrome “Intercooler” badge. There was one slight hitch though, for all the manuals it was a simple swap of parts. For owners with the rarer Borg Warner AW71 automatic transmissions the surgery was a bit more involved. Due to the higher torque ratings two critical components had to be swapped to compensate. First the valves and springs in transmission had to be remedied with a separate R-Sport Kit that retailed for \$35 US, but that was the easy part. Cars built from 1982 to mid 1983 had different rear differentials and gearing, although it could handle the upgrade under normal driving situations it wasn't recommended for extended use or stiff acceleration so the rear axles had to be swapped for more robust gearing at a cost of \$400. But how could you compare \$1000 bucks to the prospect of smoking a \$65,000 (\$127,000 in 2011) Ferrari V8 or in the case of the Jaguar XJ-S even a high output V-12! Needless to say the kits sold like hot cakes! With



relative ease and an installation time of less than three hours it gave owners ample time to go BMW or Saab hunting later that night. Every Saab, BMW, Porsche or Audi owner knew that if a Volvo Turbo pulled up next you it would show you one thing, its taillights!

### **Passing on the Legacy**



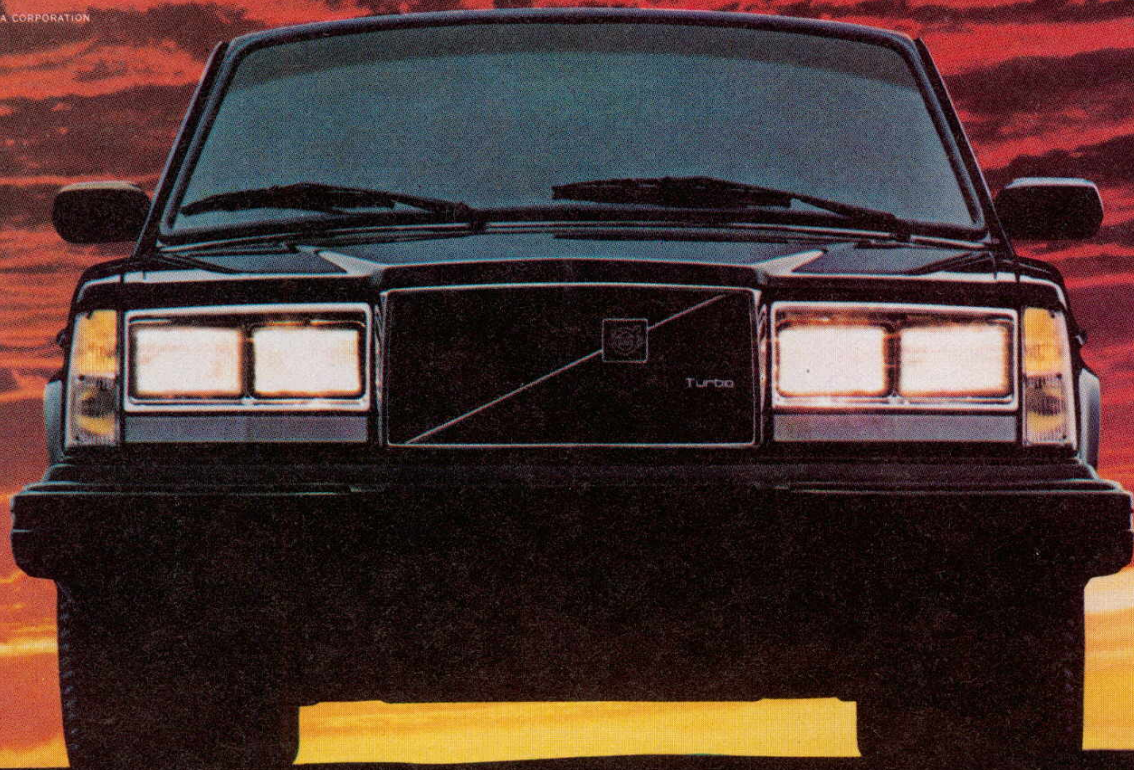
All good things must come to an end and in 1985 this one did. After four years of building the meanest “family stop light rockets” it was time for the 240 Turbo to drive off into the sunset and pass the torch on. In 1985, Volvo introduced a new model to their Turbo line-up, the sleeker wedge shaped 740 Turbo Intercooler sedan and wagon. However, there were no tears when the last ‘85 Turbos rolled off the assembly lines. Volvo enthusiasts had lost a legend but what they gained was an ever meaner car with far more power! Although, the 740 Turbo was equipped with a redesigned higher displacement version of the B21FT engine know as the B230FT, it shared the same Garrett turbocharger and intercooler core with the 240. The new 740 Turbos were so powerful they would easily do 0-100 kph in a blistering 7.9 seconds and the 1/4 mile in a mere 15s (Car & Driver). Like the legendary 240 Turbo the 740 Turbo would initiate another series of performance complexes and crises among drivers of its rivals.

## The Legacy Continues



Even by today's standards the Turbos are still very competitive. It has been almost twenty years since production ended, yet these extremely rare masterpieces still manage to turn heads. Today 240 & 740 Turbo Intercoolers in good condition are highly coveted and sought after by automotive collectors. I would know as I'm privileged enough to own an original first year light blue metallic 1985 740 Turbo Intercooler sedan. Most owners still remember three things, the day they got their licence, the day they got married and finally, the day they discovered the iconic 240 & 740 Turbo for the very first time and/or the day they floored it and smoked a BMW! They remember a simpler time where looks weren't quite everything and where aggressive and intimidating styling (referred to as "ugly" or "boxy" by the ignorant passerby) reigned supreme. The 240's and 740's started off a turbocharged Volvo heritage that lives on even today in the C, V, S and XC-Series Volvos. The 240's and 740's laid a solid framework for the well received turbocharged 850 T5/T5-R/Rs & 940 Turbos which replaced them. After 30 years that same legacy is still going strong, ironically so are many of the original cars that stared it!





# FALL IN LOVE IN 9 SECONDS FLAT.

The Volvo Turbo can hurtle you from a standing start to maximum legal speed in a mere 9 seconds.

Its turbo-charged 4-cylinder engine can blow a V-8 off the road. It has caused automotive writers to use descriptions like "Spectacular." "A blast." "Like cutting in an afterburner."

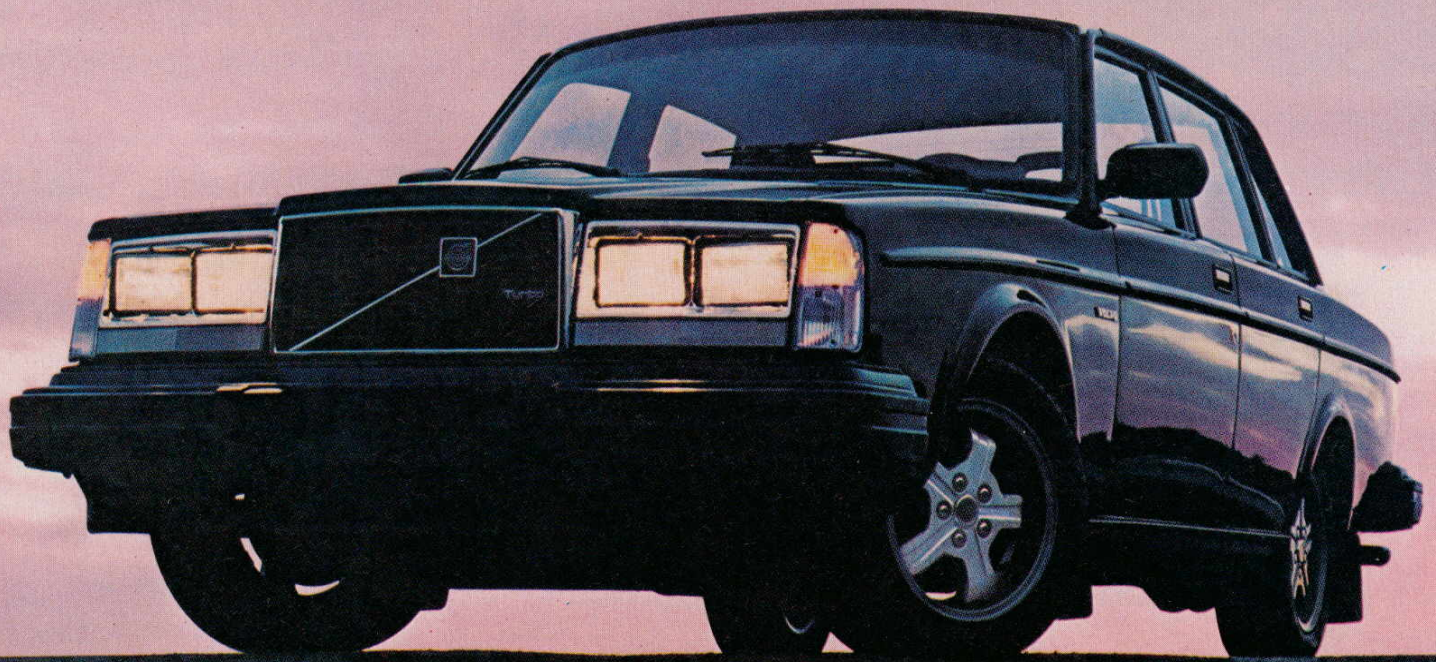
If that's the kind of driving excitement you thought had vanished with the muscle cars of the past, test drive a Volvo Turbo.

It could rekindle your love affair with the car.

## THE TURBO

By Volvo.





# LIFE IN THE FAST LANE.

Now there's a car for all those who thought living in the fast lane was incompatible with owning a Volvo.

Automotive writers have described the Volvo Turbo as "A blast." "Spectacular." "Like cutting in an afterburner."

The Turbo can dust a V8 off the line. Or send you rocketing past a BMW 320i.

Even more amazing, all this fast living shouldn't shorten its life expectancy. Volvos last an average of 19.3 years in Sweden. Of course, driving conditions in Canada are different so your Volvo may not last as long. Then again it may last longer.

The Volvo Turbo. Test drive one and you may not slow down for years.

## THE TURBO

By Volvo.





# THE WORLD'S FASTEST BAGGAGE HANDLER?

If there's a station wagon in the world that's faster than the Turbo Wagon from Volvo, it's a very well-kept secret.

The Turbo Wagon can take you from a standing start to the legal speed limit in 9.2 seconds. As *Motor Trend* puts it: "You keep hoping for a stray Saab 900 Turbo or even a BMW you can sniff out and then send scrambling to the roadside while you blow its doors in."

We assure you, a test drive in the Turbo Wagon will be very revealing.

Especially if you thought the only time a station wagon could haul was when it had something in the back.

## THE TURBO WAGON

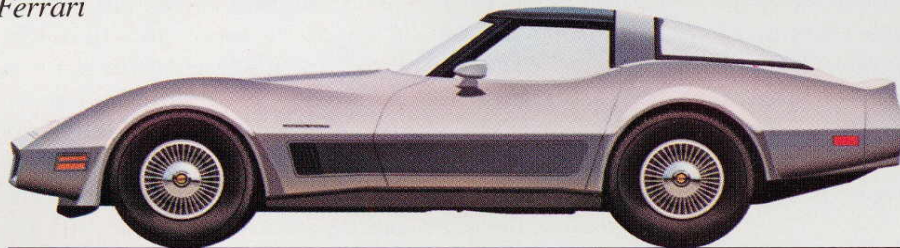
By Volvo.



# A FEW CAR MAKERS WHO STILL BELIEVE IN REAR WHEEL DRIVE:



Ferrari



Corvette



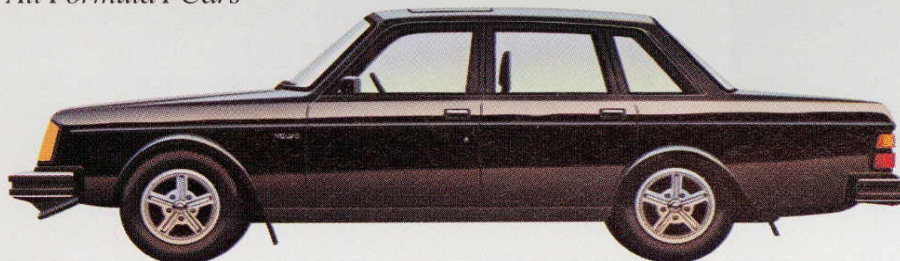
All 33 cars at Indy



Porsche



All Formula 1 Cars



Volvo

In an era when just about everyone seems to be touting front wheel drive as the greatest thing ever to come down the pike, there's one thing you should know.

Virtually every car in the world today that's famous for performance and handling uses rear wheel drive.

Of course, a Ferrari or Formula 1 car may not exactly fit your family's driving needs.

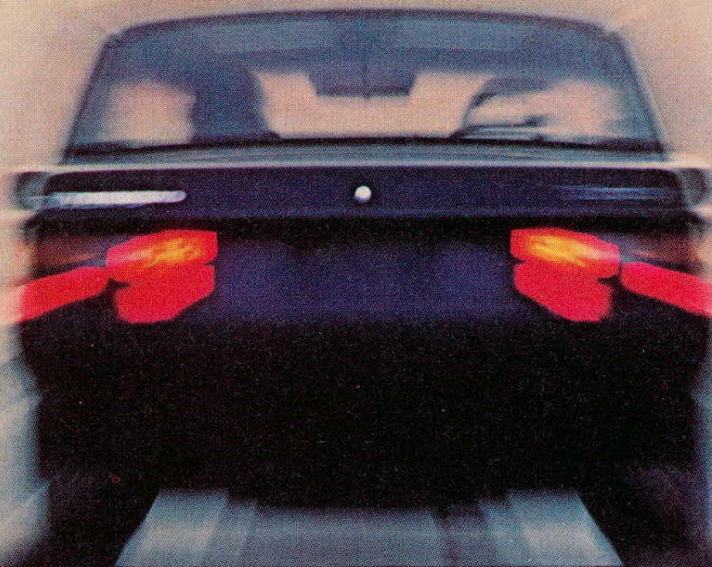
So why not consider a Volvo Turbo?

When it comes to handling and performance, you'll find it leaves a lot of front wheel drive cars bringing up the rear.

**VOLVO**

A car you can believe in.





# THE VOLVO TURBO AS MOST COMMONLY VIEWED FROM A BMW 318i.

The posterior of a Volvo Turbo may not be its most attractive feature, but it's the one BMW 318i owners will be seeing a lot of.

In an independent test\* of 0 to 60 acceleration, the intercooled Turbo from Volvo beat the 318i by almost two seconds.

Results like this have prompted *Car and Driver* to call the Volvo Turbo "a missile."

And *Road & Track* describes its handling and performance as "Exemplary."

So before you run out and buy the ultimate driving machine, test drive the intercooled Turbo from Volvo.

It could prevent you from becoming one of those BMW owners with 20/20 hindsight.

\*Tests of acceleration conducted by *Car and Driver*.

## THE TURBO+

By Volvo.





# YES, IT WILL FLY.

If you don't believe it, strap yourself into the cockpit of a Volvo 740 Turbo and take off.

This flying machine will rocket you from a standing start to legal speed in 6.7 seconds.\* Faster than a BMW 325e. Faster than an Audi 5000S Turbo. Faster, even, than the much-touted Saab 16-valve Turbo.

"Enough juice to kick you squarely in the seat of the pants," exclaims *Autoweek*.

"...A brisk rush of surprise and pleasure.... Exemplary performance and handling," says *Road & Track*.

So check into your Volvo dealers and log some time in the intercooled 740 Turbo.

No pilot's license required.

\*Based on tests conducted by Car And Driver.

**THE 740 TURBO**  
By Volvo



**THIS IS WHAT  
YOU LOOK LIKE  
GOING FROM  
0-100 KM/H**



**IN A VOLVO  
740 TURBO.**



Blistering performance all wrapped up in Volvo's legendary reputation for durability and dependability  
If this one doesn't get your pulse racing, we suggest you consult your physician.

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# HOW TO SURVIVE A MID-LIFE CRISIS. WITH DIGNITY.



The ferociously quick, incredibly opulent Volvo 740 Turbo. Drive one and the only thing you're likely to embarrass is the other guy.

**THE VOLVO 740 TURBO.**

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