Volvo 240 GLT TURBO

In the early 1980s, Volvo wanted to transform its safe but somewhat dull image. The solution was to add a turbocharger and almost 50 bhp to the 240—and race it in the competitive European Touring Car Championship where it proved highly competitive.

VITAL STATISTICS

| Top speed:   | 107 mph |
| 0-60 mph:    | 8.9 sec. |
| Engine type: | In-line four |
| Displacement:| 2,127 cc |
| Max power:   | 127 bhp at 5,400 rpm |
| Max torque:  | 150 lb-ft at 3,750 rpm |
| Weight:      | 3,200 lbs. |
| Gas mileage: | 25 mpg |
| Price:       | $15,470 |

...excellent power.

"Volvo did a good job with the turbo conversion. It is tuned to give excellent power and torque from very low rpm, masking any turbo lag.

Boost comes in from as low as 1,500 rpm, but it really gets going around 3,300 rpm. The chassis is capable of handling the additional power. It's stiff enough to resist roll through fast corners, is stable at high speed and comfortable despite the uprated shock."

The instrument panel retains the feel of a standard 240, but with an added boost gauge."
Volvo 240 GLT TURBO

There was little Volvo could do to make the 240 look like a performance car apart from using the basic shell and fitting it with smarter alloy wheels and lower-profile, higher-performance tires.

Four-cylinder engine
Adding a turbocharger drastically increased the power output of the Volvo 2.1-liter, four-cylinder, overhead-cam engine. In U.S. form the Turbo version gives 127 bhp and 150 lb-ft of torque.

Front air dam
The 240 first featured a front air dam in 1978, when the GT was launched. This was continued on the lower-powered models to help stability. It was especially needed in the GLT Turbo models.

Live rear axle
The live rear axle is typical for a 1970s Volvo. Trailing links and a Panhard rod were added, as were De Carbon shocks and a thicker anti-roll bar.

Strut front suspension
The original 240 used MacPherson struts for the front suspension. This was retained for the Turbo but with a thicker anti-roll bar and gas-pressurized shock absorbers.
Overdrive
When the GLT Turbo was built, Volvo was using a four-speed manual with a separate overdrive unit. The transmission was modified for the Turbo, with a lower first-gear and a higher final-drive ratio.

Garrett turbocharger
Volvo fitted a Garrett AirResearch BT03 to the GLT Turbo. Although it could run with a carburetor, Volvo used electronic fuel injection. Later, an intercooler was added to increase power and to lower intake air temperatures.

Specifications
1983 Volvo 240 GLT Turbo

ENGINE
Type: In-line four-cylinder
Construction: Cast-iron block and alloy head
Valve gear: Two valves per cylinder operated by a single belt-driven overhead camshaft
Bore and stroke: 3.62 in. x 3.15 in.
Displacement: 2,127 cc
Compression ratio: 7.5:1
Induction system: Fuel injection with Garrett AirResearch BT03 turbocharger
Maximum power: 127 bhp at 5,400 rpm
Maximum torque: 150 lb-ft at 3,750 rpm

TRANSMISSION
Four-speed manual with overdrive

BODY/CHASSIS
Unitary monocoque construction with steel two-door sedan body

SPECIAL FEATURES

The 240 GLT was the first Volvo to be fitted with a turbocharger.

An external power jack can be used to run camping equipment.

RUNNING GEAR
Steering: Rack-and-pinion
Front suspension: MacPherson struts with lower control arms, telescopic shock absorbers, and anti-roll bar
Rear suspension: Live axle with trailing arms, Panhard rod, coil springs, telescopic shock absorbers, and anti-roll bar
Brakes: Vented discs, 10.3-in. dia. (front), solid discs, 11.0-in. dia. (rear)
Wheels: Alloy, 14-in. dia.
Tires: 185/60 HR14

DIMENSIONS
Length: 192.5 in. Width: 67.3 in.
Height: 56.3 in. Wheelbase: 104.3 in.
Track: 56.3 in. (front), 53.5 in. (rear)
Weight: 3,200 lbs.
1974 Volvo launches the 240. It remains in production for the next 20 years.

In Touring Car racing, the 240 was dominant in 1983-1984.

1981 Following the 240 GT, Volvo fits a turbo to the 2.1-liter engine to create its most powerful road car, the 240 GLT Turbo.

Volvo’s 850 T-5 is a spiritual successor to the 240 Turbo.

1984 Ulf Granberg and Robert Kvist drive the 240 Turbo to its first win in the European Touring Car Championship.

1985 An ‘Evolution’ 240 with a larger turbo and intercooler is raced despite arguments over its homologation. It wins four races including Anderstorp in Sweden.

1986 Production of the 240 GLT Turbo comes to an end.

**Milestones**

**UNDER THE SKIN**

**Major changes**

The 240 underwent a number of changes to turn it into a high-performance turbo car. The monocoque body was unaltered, but the MacPherson-strut front suspension was upgraded with gas shocks and thicker anti-roll bars. The same treatment was given to the live rear axle with its coil-sprung suspension. The first gear ratio in the four-speed plus overdrive transmission was changed, and the braking upgraded by using larger vented front discs.

**THE POWER PACK**

**Upgraded for power**

Volvo’s four-cylinder engines were known for their strength, but the short-stroke, 2.1-liter four had to be modified for its turbocharged conversion. The compression ratio was lowered from 9.3:1 to 7.5:1 to allow for the boost, and the exhaust valves were upgraded with sodium-filled stems (like high-performance Italian engines) to reduce valve train weight, along with harder stellite valve seats. The engine retained the same iron block and alloy head with two valves per cylinder operated by a single belt-driven overhead camshaft.

**Garret T3 turbocharger**

**Pace and space**

Volvo saw no reason why its traditional station wagon customers should not have the same excitement that the Turbo sedan offered. So it produced a load-carrying version that handled and performed extremely well.

The Turbo was built as a sedan and a wagon.

**NOSE TO NOSE**

Ford Thunderbird Turbo Coupe • Saab 900 Turbo • Volvo 240 GLT Turbo

<table>
<thead>
<tr>
<th>TOP SPEED</th>
<th>0-60 mph</th>
<th>POWER</th>
<th>WEIGHT</th>
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<tbody>
<tr>
<td>137 mph</td>
<td>6.8 sec.</td>
<td>190 bhp</td>
<td>3,380 lbs.</td>
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<tr>
<td>131 mph</td>
<td>7.5 sec.</td>
<td>175 bhp</td>
<td>2,833 lbs.</td>
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**RIVAL CARS**

Ford Thunderbird Turbo Coupe

Saab 900 Turbo

Volvo 240 GLT Turbo