

**VOLVO**



## Where your money goes when you buy a Volvo.

As car prices and interest rates spiral, so do people's expectations about what they should get for their money. In a survey rating new cars for value,<sup>1</sup> a higher percentage of Volvo owners rated their car an excellent value for the money than the owners of 35 domestic and imported makes tested—for the second straight year. Perhaps this explains why Volvos have set new sales records for five years running, during a time when more than a few auto makers could hardly give rebates away.

**Every Volvo is an investment in longevity. For more than 55 years, Volvos have been durable, well-built, great value for the money—but never more so than today.**

The body parts and key structural members vulnerable to rust are made out of galvanized steel and Zincrometal.<sup>2</sup> To further minimize rust-prone joints, Volvos are assembled from the largest possible body panels. Instead of squeaky, rattling bolts, Volvo uses over 4,000 spot welds—each strong enough to support the weight of the entire frame. In addition, these spot welds help keep joints from becoming the targets for rust. Throughout, the Volvo body design strives to eliminate unnecessary enclosures and crevices where moisture and dirt might ordinarily collect. Every inch of the Volvo receives anti-corrosive protection; then Volvo bodies receive a four-coat paint process above the belt-line, and a five-coat process below.

**The engine in your Volvo has been carefully selected for your Volvo.**

Horsepower alone doesn't produce high performance, and it certainly doesn't promote fuel economy.

Therefore, our engines deliver more torque, not just unbridled horsepower, over a wide range of speed—so that you can enjoy better performance and efficiency, from initial acceleration on through high-speed passing situations.

Since many technical variables are involved in Volvo's performance equation, our engineers assume the responsibility for matching engines with models.

**By design, Volvos are eminently controllable cars.**

Many cars that are relatively easy to control under ideal weather and road conditions become difficult to control in a moment of panic. Volvos, on the other hand, are designed to respond to your reactions in a crisis just as they respond to your actions under normal driving conditions.

A number of components and interrelated systems combine to give the Volvo its distinctive handling characteristics.

# DL

Two-door sedan  
Four-door sedan

Four-cylinder  
Four-cylinder

*When you get down to sticker price, the DL sedan—the basic Volvo—is positively luxurious.*

# DL

Wagon

Four-cylinder

*"If you think of an imported station wagon as embodying Old World quality and limitless practicality, then Volvo is the standard bearer."  
—MOTOR TREND's Import Car Buying Guide.*

<sup>1</sup>Sept. '80 New Car Buyers survey, conducted by Beta Research (U.S. Market).

<sup>2</sup>Zincrometal is a registered trademark of the Diamond Shamrock Corporation.



**Power-assisted rack and pinion steering is standard on all Volvos. Volvo engineers believe that it is one of the most responsive and reliable steering systems that can be built into a car.**

Fewer moving parts account for its reliability. And, while turning your Volvo in its tight 32-foot-2-inch (9.8 metre) turning circle is almost effortless, the car's response to your steering commands is not diminished. When you move the wheel, you move the car.

**All Volvos have power-assisted disc brakes on all four wheels.**

Disc brakes tend to resist brake fade better than conventional drum brakes. Better still, Volvo's disc brakes—unlike any others sold in America—have Volvo's pioneering dual triangular split brake circuit system. Each brake circuit simultaneously and independently serves both front wheels (the ones that do most of the braking), and one opposite rear wheel. Should one system fail, the other provides about 80 percent of the braking power of the whole system.

Volvo's stepped-bore master brake cylinder lends additional integrity to the dual brake circuit system. If one circuit fails and the brake fluid chamber drains, the master brake cylinder will sustain the pressure in the remaining brake circuit, enabling you to stop the car with a nearly normal amount of pressure on the brake pedal.

**The Volvo suspension gives the driver precise steering control, but it doesn't sacrifice comfort.**

Each front wheel is independently suspended by a McPherson strut, an ingenious device that incorporates a coil spring and a shock absorber into one unit. In other words, your Volvo is designed to respond immediately to your steering commands, and doesn't sway its way between lanes or around corners.

In back, Volvo engineers have selected a "live" rear axle to do the job of keeping the rear wheels on the road at the same angle. As a result, Volvo's road-holding ability remains as consistent as possible in all driving situations.

**For better traction, all Volvos have steel-belted radial tires mounted on wide-based rims and centered on lathe-turned hubs.**

The radials on every Volvo have steel belts, an especially wide surface area, and tread that stays open for better grip when cornering on wet pavement.

The use of wide-base rims makes it possible to select more efficient, better running, wide-base radials. And, to make tire alignment less of a problem, Volvo rims are centered on lathe-turned hubs for precise fit and true running.

Volvo engineers try not to leave anything to chance.

**In every Volvo form follows function; they're designed and built to fit you, rather than requiring you to fit them.**

Every Volvo is a study in ergonomics—the

# GL

Four-door sedan

Four-cylinder

Six-cylinder Diesel

*Although the Volvo GL delivers fuel economy, it can satisfy even an oil shiek's penchant for opulence.*

# GL

Wagon

Four-cylinder

Six-cylinder Diesel

*Half the fun of showing off your new Volvo GL wagon is watching your friends play "Guess how much it costs!"*



science of making machinery more comfortable and more efficient for people to use.

The doors open wide, to an angle of nearly 80 degrees. High seats and a properly positioned steering wheel make it unusually easy to get in and out of your Volvo.

The front seats themselves are famous: they're comfortable because they're orthopedically designed and adjust nine different ways to accommodate almost every conceivable human shape and size in an anatomically correct position. The unique, adjustable lumbar support eases pressure on the spine, the cause of back tension and driver fatigue. Be sure to climb into the back seat. You'll find another welcome surprise: leg room.

Your Volvo and its instrumentation are designed not to get in your way. Accordingly, all Volvo sedans and wagons have excellent *all-around* visibility from the driver's seat. The front door pillars, for instance, are no wider than the distance between your eyes—so you look through, not around them. All the dials, gauges, and switches are easy to see, day or night, and are easy to reach. To reduce muscle tension and provide a more stable driving position, Volvos have a *left* foot rest, so both the driver's feet are comfortably positioned on a similar plane.

A twelve-outlet ventilation and heating system distributes air throughout the Volvo—rapidly, evenly, and quietly.

Ergonomics even extend to the luggage compartments of Volvo sedans. They're deep, with flat floors, so you can set luggage up vertically.

In Volvo, virtually nothing has been overlooked. More reasons why Volvos are cars people swear by, not at.

**Volvo engineers were committed to researching and improving automobile safety long before it was required by law—let alone fashionable.**

By the time legislators and manufacturers woke up to the importance of auto safety, Volvo had become the model to emulate.

Certain Volvo features—the steering, braking, and suspension systems—are designed to help you maneuver your way out of trouble. A variety of other features are designed to help protect you if you can't avoid an accident.

Front and rear crumple zones—areas designed to give themselves up in the event of a crash—help absorb the force of an impact rather than transmitting it all to the passenger compartment. Each door is reinforced with a tubular steel bar, which is attached to the door frame by a patented Volvo process. Three-point seat belts, with inertia reels and Volvo's patented slip-joint anchors, help protect the two front-seat passengers *and* the two outside rear passengers. (A lap belt is provided for the middle rear-seat passenger.) Comforting information.

**When all is said and done, the most important things that go into Volvos are people.**

# Turbo

Two-door sedan  
Four-door sedan

Four-cylinder Turbo\*  
Four-cylinder Turbo

*Automotive writers still find themselves groping for an apt description: "Spectacular." "A blast." "Like cutting in an afterburner."*

# Turbo

Wagon

Four-cylinder Turbo

*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."*

\*A two-door GLT sedan is also available in Canada. It has a sturdy B23E, fuel-injected engine—and all the amenities and handling characteristics of Volvo Turbos.



# The 1983 Volvos at a glance

## DIMENSIONS AND WEIGHTS

Wheelbase	104.3 in.	264 cm
Overall length	188.8 in. (US)	489 cm (CND)
Overall height, sedans	56.2 in.	143 cm
wagons	57.5 in.	146 cm
Overall width	67.2 in.	171 cm
Track, front	56.3 in.	143 cm
rear	53.5 in.	136 cm
Legroom		
Front, all models	39.8 in.	103.5 cm
Rear, sedans	36.6 in.	93 cm
wagons	36.4 in.	92 cm
Headroom		
Front, all models	37.4 in.	95 cm
Rear, sedans	36.6 in.	92 cm
wagons	36.4 in.	93.5 cm
Trunk capacity, sedans	13.9 cu. ft.	0.4m <sup>3</sup>
Cargo capacity, wagons	41.1 cu. ft.	1.2 m <sup>3</sup>
Rear seat down	76.0 cu. ft.	2.2 m <sup>3</sup>

## BODY

Unitized. Central passenger safety cage with energy absorbing front and rear ends. Rust-proofing includes use of galvanized steel in susceptible areas; anti-corrosive coating inside doors, rocker panels, etc.; extensive undercoating and special stone chip resistant paint. Aluminum tailpipe and muffler.

## B23F-LH LAMBDA ENGINE: UNITED STATES DL, GL MODELS

In-line four; cast iron block with light alloy "cross-flow" cylinder head. Overhead camshaft. Fuel injection, and closed-loop Lambda Sond® emission control.

Displacement:	141 cu. in.
Compression ratio:	10.3:1
Horsepower, SAE-net:	107 @ 5400 rpm
Torque, ft. lbs., SAE-net:	127 @ 3500 rpm
Sealed cooling system	
automatic:	9.8 qts.
manual:	10.0 qts.
Fuel tank:	15.8 gallons, unleaded 91 RON

## D24-ENGINE: DIESEL MODELS

In-line overhead cam, six-cylinder diesel with indirect fuel injection into swirl chambers.

Displacement:	145 cu. in.	2383 cc
Compression ratio:	23.0:1	23.0:1
Horsepower, SAE-net:	76 @	76 @
	4800 rpm	4800 rpm
Torque, ft. lbs. SAE-net:	98 @	98 @
	2800 rpm	2800 rpm
Sealed cooling system		
automatic:	9.8 qts.	9.2 litre
manual:	10.0 qts.	9.4 litre
Fuel tank:	15.8 gallons	60 litres

## B21F-T: TURBO MODELS

Fuel injected in-line four; cast iron block with light-alloy "cross-flow" cylinder head. Overhead camshaft. Lambda Sond® emission control. Exhaust-driven turbo-compressor.

Displacement:	130 cu. in.	2127 cc
Compression ratio:	7.5:1	7.5:1
Horsepower, SAE-net:	127 @	127 @
	5400 rpm	5400 rpm
Torque, ft. lbs., SAE-net:	150 @	150 @
	3750 rpm	3750 rpm
Sealed cooling system		
automatic:	9.8 qts.	9.2 litre
manual:	10.0 qts.	9.4 litre
Fuel tank:	15.8 gallons, unleaded	60 litres, regular unleaded
	91 RON	

## B-21AO ENGINE: CANADIAN DL MODELS

Carbureted in-line four; cast iron block with light alloy "cross-flow" cylinder head. Overhead camshaft.

Displacement:	2127 cc
Compression ratio:	9.3:1
Horsepower, SAE-net:	100 @ 5250 rpm
Torque, ft. lbs., SAE-net:	122 @ 2500 rpm
Sealed cooling system	
automatic:	9.2 litre
manual:	9.4 litre
Fuel tank:	60 litres, premium leaded or premium unleaded 96 RON

## B-23E ENGINE: CANADIAN GL AND GLT TWO-DOOR

Fuel injected in-line four; cast iron block with light alloy "cross-flow" cylinder head. Overhead camshaft.

Displacement:	2316 cc
Compression ratio:	10.3:1
Horsepower, SAE-net:	115 @ 5000 rpm
Torque, ft. lbs., SAE-net:	133 @ 3000 rpm
Sealed cooling system	
automatic:	9.2 litre
manual:	9.4 litre
Fuel tank:	60 litres, premium leaded or premium unleaded 96 RON

## ELECTRICAL SYSTEM

12 V. solid-state ignition (except Canadian DL models which are carbureted). 55 amp alternator on all Turbo and diesel models; 70 amp alternator on all other models. (Canada: 55 amp alternator on all models.) 60 amp-hour battery on four-cylinders; 88 amp on diesels.

## DRIVETRAIN

Manual: Four-speed fully synchronized transmission. Electrically operated overdrive automatically releases when you shift from 4th to 3rd gear. Gear ratios: 1st, 4.03:1; 2nd, 2.16:1; 3rd, 1.37:1; 4th, 1.00:1; overdrive, 0.80:1. Final drive ratios: B23F-LH Lambda, 3.31:1; D24, 3.54:1; B21F-Turbo, 3.73:1; B21AO, 3.54:1; B23E, 3.73:1.

Automatic: four-speed with overdrive fourth gear; floor-mounted shift lever, with an illuminated PRND21 pattern. Final drive ratios: B23F-LH Lambda, 3.73:1; B21F-Turbo, 3.91:1. Three-speed, floor-mounted shift lever, with an illuminated PRND21 pattern. Final drive ratios: D24, 3.31:1; B21AO, 3.54:1; B23E, 3.54:1.

## STEERING SYSTEM

Rack-and-pinion gear. Servo-assist is standard on all models. Turning circle: 32'2" (9.8 m). Turns lock-to-lock: 3.5.

## SUSPENSION SYSTEM

Front: McPherson strut incorporating coil springs and telescopic shock absorbers. Stabilizer bar. Turbos have larger-diameter stabilizers and gas-filled shocks. The Canadian two-door GLT has a larger diameter stabilizer and gas-filled front shocks.

Rear: Rigid "live" axle located by longitudinal control arms and torque rods. Lateral location by track rod. Coil springs and telescopic shock absorbers. Stabilizer bar. Turbo sedans have larger diameter stabilizers and gas-filled shocks. The Canadian two-door GLT has a larger diameter stabilizer and gas-filled rear shocks.

Tires: Steel belted radials. U.S. DL sedans, 175/R14; GL sedans, 185/70R14; DL and GL wagons, 185/R14; Turbo sedans and wagons, 195/60R15. **Canada:** DL sedans and wagons, 185/75R14; GL gasoline sedans and wagons, 185/75R14; GL diesel sedans, 185/75R14; GL diesel wagons, 185/R14; GLT sedan, and Turbo sedans and wagons, 195/60R15.

## BRAKE SYSTEM

Self-adjusting disc brakes on all four wheels. Tandem-type power assist. Ventilated front discs are standard on United States Diesels, Turbos and all wagons (Canadian GL diesel, two-door GLTs and Turbo models). Each circuit of the dual triangular split hydraulic brake system connects both front wheels and one rear wheel. Stepped-bore master cylinder maintains nearly normal pedal effort, if one circuit fails. Handbrake operates mechanically on separate rear wheel drums.

## VOLVO

The factory reserves the right to make changes at any time, without prior notice, in prices, colors, materials, standard equipment, specifications, and models, also, to discontinue, introduce or supersede models. The bumpers shown on DL's are standard on all models in Canada. GL and Turbo models depict bumpers standard on all U.S. DL/GL/Turbo models. The quotes in this brochure may refer to 1982 Volvos or to earlier models.