

The Volvo Car Corporation - a Presentation





The Volvo Car Corpor

The Volvo Group

Sales	SEK 23,472 million
Income before allocations and taxes	SEK 1,244 million
Investments in property, plant and equipment	SEK 962 million
Number of employees (Dec 31, 1979)	65,000

Assembly facilities

(number of cars assembled)

Volvo Torslanda Plant Sweden	145,600
Volvo Car B.V. The Netherlands	90,500
Volvo Europa N.V. Ghent Belgium	37,200
Volvo Kalmar Plant Sweden	27,500
Volvo Canada Ltd Canada	8,600
Other facilities (Australia, Malaysia, Indonesia, Thailand)	10,600

Volvo Car Corporation

Sales	SEK 12,616 million
Income before allocations and taxes	SEK 340 million
Investments in property, plant and equipment	SEK 654 million
Number of employees	25,000
Production - number of cars	320,000
Sales-number of cars	302,000
of which Volvo 260/240 Series	219,000
Volvo 66/340 Series	83,100

Top Ten Markets

(number of registered Volvo car sales)

1 Sweden	55,800
2 USA	53,700
3 Great Britain	36,600
4 The Netherlands	27,000
5 West Germany	25,000
6 Belgium	13,300
7 Norway	9,400
8 France	8,900
9 Italy	8,400
10 Switzerland	7,500



ation -facts and figures

- A member of the Volvo Group, the Volvo Car Corporation is responsible for the development, manufacture and marketing of the car programme.
- Volvo has a well established international position with the Volvo 240 and 260 Series. In the USA, for example, the Volvo 240/260 Series cars have for many years been the best selling cars in their class among imported makes. The Volvo 240/260 Series are among the best selling cars in Europe in this class. The production programme for the Volvo 340 Series has been doubled in stages.
- The Volvo Car Corporation has authorized a long-term development programme with the aim of ensuring Volvo the technical capabilities and the product standards which will be required by the late 1980s. In 1979, Volvo concluded an industrial co-operation agreement on research, design and product development with Renault. The French company simultaneously acquired 10% of the shares of the Volvo Car Corporation with the right of refusal on a doubling of the shareholding.
- The Volvo Car Corporation has entered the 1980s with very high capacity utilization in its assembly plants and with a vigorous demand for its products on the majority of the major markets.

This is the Volvo

The Volvo Group

The Volvo Group is the largest engineering enterprise in the Nordic area with the emphasis in its production mainly on products for the world of transportation. Since 1969, sales have increased from SEK 4,400 million to SEK 23,472 million in 1979. The total labour force numbers more than 65,000.

The car operations are responsible for slightly more than half of the turnover, trucks and buses representing slightly more than a quarter. Other products manufactured by the Volvo Group include marine and industrial

engines, earthmoving, agricultural and forestry machines, aircraft engines, hydraulic machines and leisure products.

Volvo Car Corporation

The Volvo Car Corporation is a member of the Volvo Group and a limited liability company with responsibility for the car programme, this covering product planning and product development, engineering and design, purchasing, manufacture and also assembly, marketing and service.

The Volvo Car Corporation has assembly plants in Sweden and abroad as well as a number of component production facilities. Volvo Car BV, of

which Volvo owns 55% -the remainder being owned by the Dutch State - builds the Volvo 340 Series. Other companies within the Group also manufacture components for the car operations.

Production up by 100,000 units

Since 1977, the Volvo Car Corporation has increased its capacity utilization significantly in step with the growing demand. In 1977, Volvo car production was 225,000 units while the equivalent figure for 1979 was 320,000 units. Heavy capital expen-



Car Corporation

diture in plant and equipment has been made to automate production, this concerning especially the monotonous and heavy work.

Marketing

An attractive product programme featuring much improved, advanced handling characteristics, and very competitive prices thanks to the greater efficiency of the Volvo organization have resulted in a very favourable sales development for both the Volvo 240/260 Series and the 340 Series on practically all of Volvo's main markets.

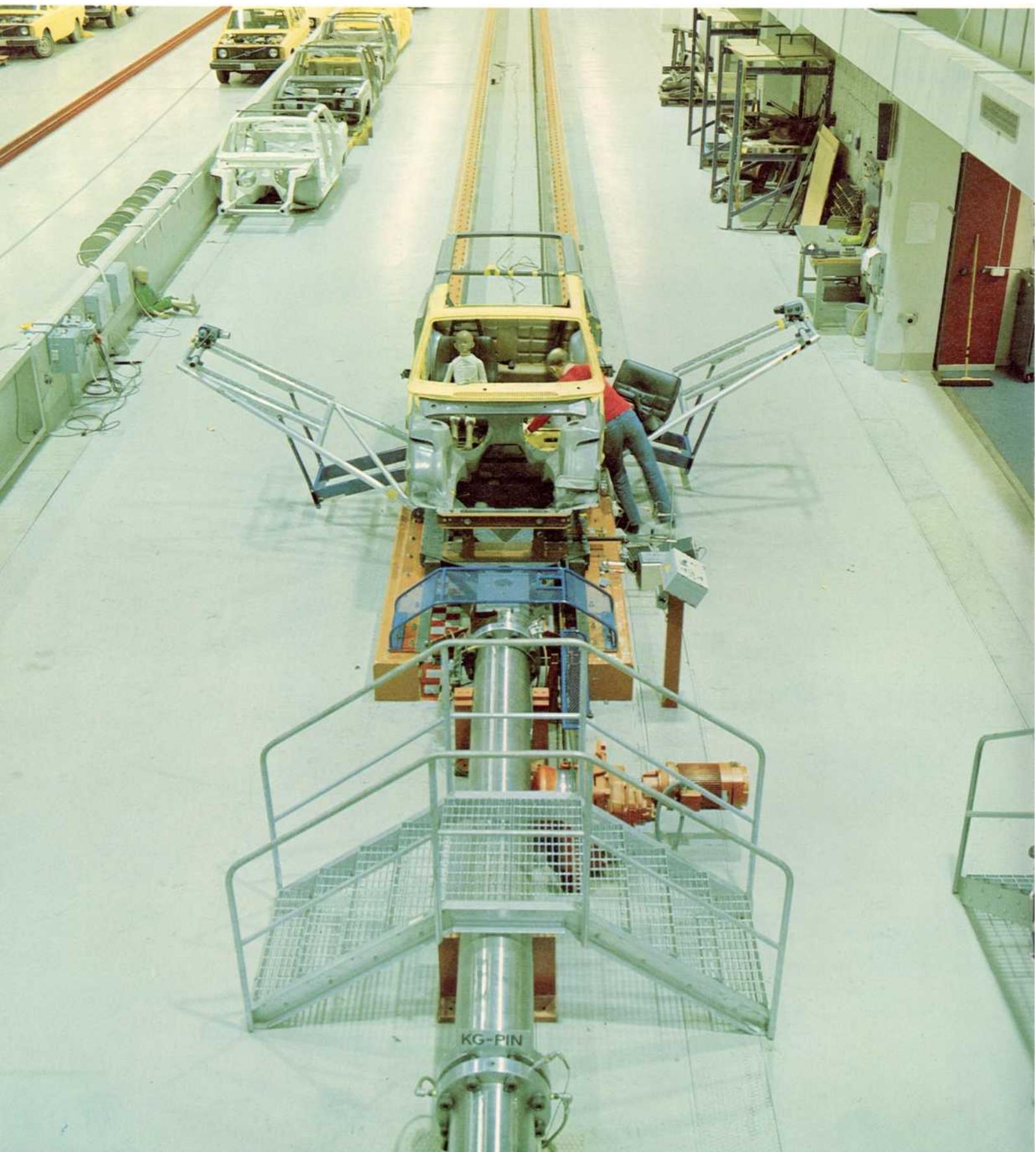
Labour force

The Volvo Car Corporation has more than 25,000 employees, 17,600 of which in Sweden. Within the other companies of the Volvo Group, about 8,000 people are engaged in producing parts and components for Volvo cars. Working in close co-operation with the employees and their trade unions, Volvo endeavours to develop forms of work and work environment which are compatible with the interests, involvement and competence of the employees, this resulting in higher levels of job satisfaction, efficiency and

consistently high quality standards. Volvo's use of advanced production technology combined with new concepts in work organization has attracted attention from all over the world.



Developing the



The Volvo Car Corporation's safety centre has all the latest equipment needed to research automotive safety problems. With the help of this catapult, for instance, collisions can be simulated without crashing any car bodies. The emphasis in these facilities is on interior safety.

cars of tomorrow



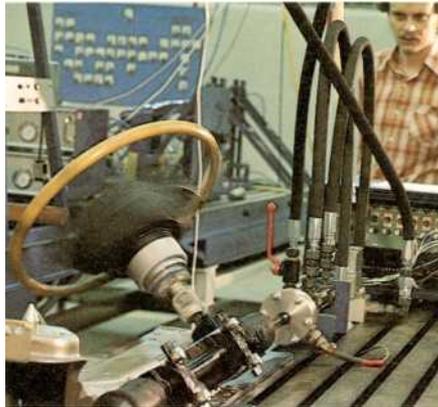
Complete cars are crashed in full scale tests. Changes in the construction of the body are tested as is its resistance, or crashworthiness, in various types of collision. Each phase of the collision is registered, giving valuable data for the continuing development work.

There are a great many factors which influence the design of a car. Customer preferences, legislative requirements enforced by different countries such as those on road safety, energy conservancy and environmental compatibility are a few of the more important. The development of lighter, less energy-demanding vehicles must be given priority. The demands for cleaner exhaust gases and still higher standards of safety-fields in which Volvo holds a prominent position - imply significant development costs.

Larger resources

As a consequence, the Volvo Car Corporation is concentrating more than ever before on product development.

The short and long-term production development facilities of the Volvo Car



Dynamic safety is a major concept at Volvo. It means that the car must react in a controlled and predictable manner even in emergency situations. A well tried and tested steering system is an important part of dynamic safety.

Corporation are situated in Gothenburg, Sweden and Helmond in The Netherlands. The Technical Centre, close to the Volvo Group Headquarters in Gothenburg, has about 2,000 staff in its engineering departments, laboratories and experimental workshops. A few miles outside of Gothenburg is the Volvo Proving Ground which plays an essential role in the current development work.

Co-operative agreement with Renault

The Volvo Car Corporation and Renault concluded an agreement in 1979 on industrial co-operation. The purpose of this agreement is to boost the competitive strength of both companies by collaboration in matters concerning research, product development and production. The terms of the agreement will enable the product



Aluminium, plastics and rubber are examples of materials which are becoming more and more important to the automotive industry. New and old materials alike are tested in the Volvo material laboratories.

programme to be renewed at a faster rate and will also open up new automotive engineering design concepts.

New material for more efficient energy utilization

As part of its future-orientated work on the Volvo cars of tomorrow, the Volvo Car Corporation has started a separate development project in co-operation with Norwegian industry. The intention is to develop new designs and test conditions for the advanced use of new materials such as aluminium, composites and plastics.



Engine development takes up a significant part of the total vehicle's development programme at Volvo. Understandably, fuel consumption and exhaust emission control are major factors. Thanks to its Lambda Sond System, Volvo has achieved more than any other car manufacturer in the struggle to reduce exhaust emissions.



Hand crafting and modern computer technology meet and integrate in the patterns workshop. With the help of numeric shaping technology, the draughting work can be done in a much shorter time than previously. However, when it comes to putting the final touches, the human hand is still master.



The suspension system is a very decisive factor in road-holding - and consequently also in dynamic safety.

Volvo facilities

In addition to its facilities in Sweden, the Volvo Car Corporation has a number of car assembly plants in other countries, namely The Netherlands, Belgium, Canada, Australia, Malaysia, Indonesia and Thailand.

Approximately 60% of total production is assembled in Sweden.

"Building cars the Volvo way"

implies that the Volvo Car Corporation is responsible for the design, development and assembly of the products. A significant proportion of the major components and systems are manufactured within the Volvo Car Corporation or by other companies within the Volvo Group. This includes pressings

and bodies, gearboxes, engines, axles and interiors.

1,500 suppliers

A total of about 1,500 suppliers in Sweden and abroad provide the Volvo assembly plants and parts warehouses with materials.

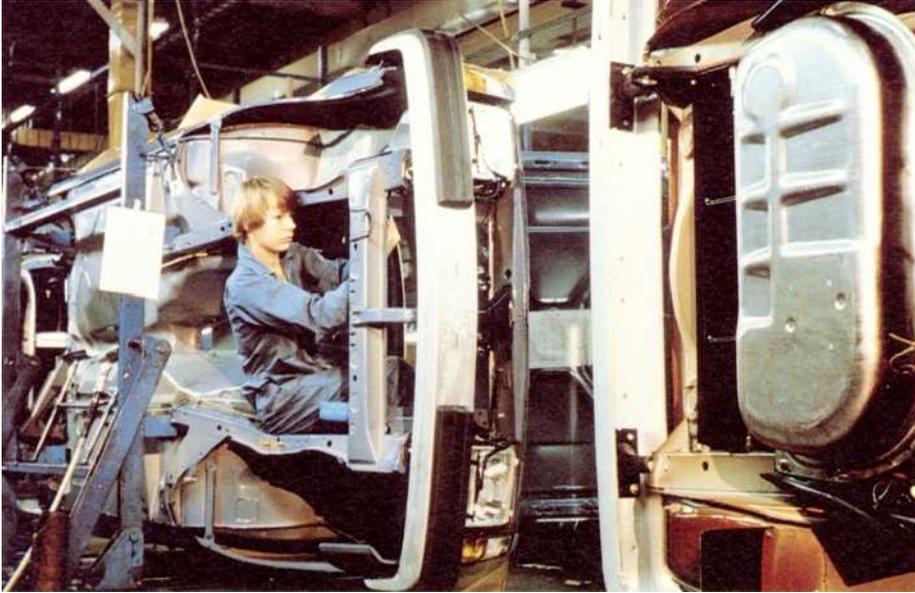
Volvo's stringent quality requirements apply whether the parts and components are made in the company's own facilities or by a Volvo supplier. The high standard of Volvo quality is built in from the start, on the drawing boards and throughout development work through solid engineer-

ing and clear-cut specifications. Understandably, an essential part of this work is the further training of the work force. Product quality is checked continuously through goods reception inspections, during production, and prior to delivery. Stringent quality control is one of the cornerstones of the long life expectancy of Volvo products.



The Volvo Torstlanda Plant in Gothenburg is Volvo's largest facility. The Volvo 240/260 Series are manufactured and assembled here. Volvo has car assembly plants in nine countries.

and suppliers



Volvo Car Corporation - major manufacturing and assembly plants

Sweden

Volvo Torslanda Plant, Gothenburg. This is the Volvo Car Corporation's biggest assembly plant with about 9,000 employees. The facilities include: Pressing shop, Body shop, Paint shop and Assembly shop. Fully painted bodies together with other components from the Torslanda Plant are sent to the assembly facilities in Kalmar and Canada.

Volvo Kalmar Plant, Kalmar. This is a unique final assembly plant with regard to the technologies used, the work environment and work organization. Since opening in 1974, the Volvo Kalmar Plant has attracted a great deal of international interest for its advanced design. Most of the work is carried out by groups of between 15 and 20 workers. The bodies are transported on battery powered and individually controlled carriers. In this manner, each team can vary its working methods and work rate, this being facilitated by the buffer stocks which can be built up between the different team areas.

The number of Volvo employees at Kalmar is more than 750 and they produce approximately 25-30,000 cars annually.

Volvo Olofström Plants, Olofström. This is Scandinavia's largest metal pressings industry with 4,000 employees. Volvo Olofström has been a member of the Group since 1969. Its

facilities produce body pressings for car production as well as pressing tools and machines for welding and assembly of body components. The production programme also includes silencers and fuel tanks. An associated factory at Konga manufactures various components including rear axle casings and heavy components for Volvo trucks and buses.

Volvo Dalsland Plants, Dalsland. These facilities are made up of three plants which are responsible for interiors, including seat upholsteries, seat belts and various injection moulded plastics components. The three factories at Bengtsfors, Färgelanda and Tanumshede employ approximately 1,000 persons.

Volvo Group Companies

In addition to the components manufactured in the above facilities which belong to the Volvo Car Corporation-components are produced by other companies of the Volvo Group, prominent among these being the Volvo Component Corporation. The four-cylinder petrol engines for the Volvo 240 Series are built at the Skövde Plant while at Floby, the production programme includes wheel hubs and brake discs. Gearboxes, front and rear axles and front suspension units are manufactured at Köping

Facilities in Europe, America, Australia and Asia

Born

Volvo 340 Series cars are built at Born in South Holland. Like the Torslanda Plant, Born has its own pressing shop. These facilities are about 10 years old and employ approximately 4,600 people.

St. Truiden

Components including steering boxes, automatic transmissions, rear axles and brakes for the Volvo 340 Series are manufactured at St. Truiden, Belgium. 800 people work here.

Ghent

The Volvo Car Corporation's second largest plant in Europe is at Ghent, Belgium. Volvo 240/260 Series cars for the European market are built here, production during 1979 exceeding 35,000 units.

Other facilities

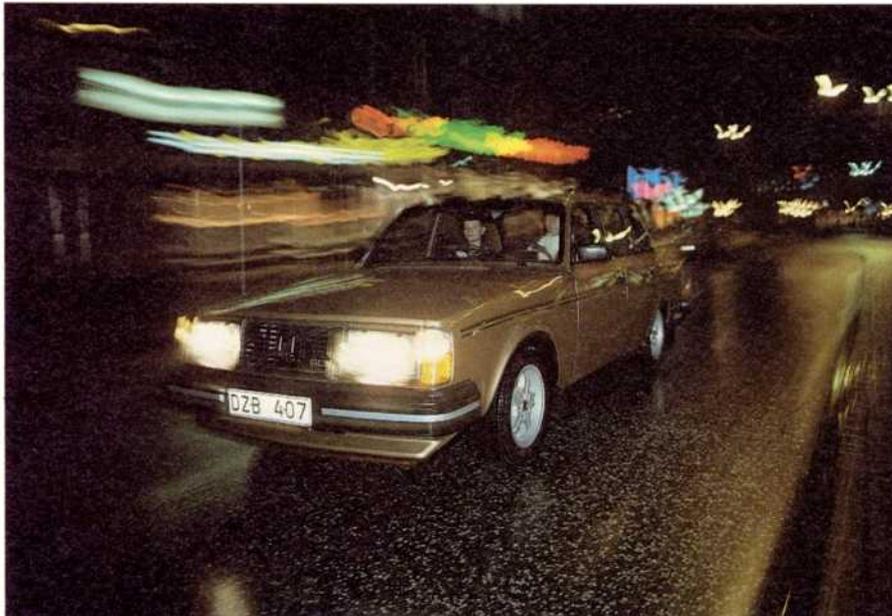
The Volvo Car Corporation has assembly plants in a number of other countries. In some cases, they are wholly-owned subsidiaries, in others they are jointly owned.

The assembly plant at Halifax, Canada, is the largest of these facilities with its 160 employees and an annual production of more than 8,000 units. Number two in size is the Australian Plant. In the Far East, Volvo cars are assembled at four smaller facilities, namely those in Malaysia, Indonesia, Thailand and Singapore.

Engine co-operation with Peugeot and Renault

The recent cooperation agreement with Renault is not the only example of long-term collaboration; together with Peugeot and Renault, Volvo has an engine plant at Douvrain in France. It is here that the six-cylinder engine is built.

Volvo round the world



15 countries dominate

Within the larger market areas, Volvo has concentrated its marketing efforts to a number of major areas. The 15 largest markets account for almost 90% of corporate sales. Volvo cars are sold in about 60 different countries.

Volvo car registrations in 1979:

1	Sweden	55,800
2	USA	53,700
3	Great Britain	36,000
4	The Netherlands	27,000
5	West Germany	25,000
6	Belgium	13,300
7	Norway	9,400
8	France	8,900
9	Italy	8,400
10	Switzerland	7,500
11	Finland	7,300
12	Australia	6,700
13	Denmark	6,600
14	Canada	6,600
15	Austria	4,200

A historic review

Ever since the start in 1927, Volvo has concentrated on exports. The Nordic countries and South America were among the first export markets.

During the 1950's, the Volvo organization in Europe was gradually strengthened. In 1956, the Volvo PV 444 was introduced on the American market and was an immediate success.

Since 1960, Volvo car sales have quadrupled in number.

Volvo cars are marketed by subsidiary companies and independent importers. Today, the Volvo Car Corporation has more than 2,500 dealers - many of whom have a number of sales outlets.

"The Volvo class"

The Volvo Car Corporation has a strong hold on the class in which the Volvo 240/260 competes. These Volvos are among the best selling cars in Europe in this class, excluding domestic markets. In the USA, the Volvo 240/260 Series have been the best-selling imported car in their respective class for a number of years.

Thanks to the 340 Series, the Volvo dealer organization has been able to increase its penetration of the small-

to-medium class. The Volvo 340 Series is in great demand and the production programme has now been more than doubled, thanks not least to the introduction of new versions.

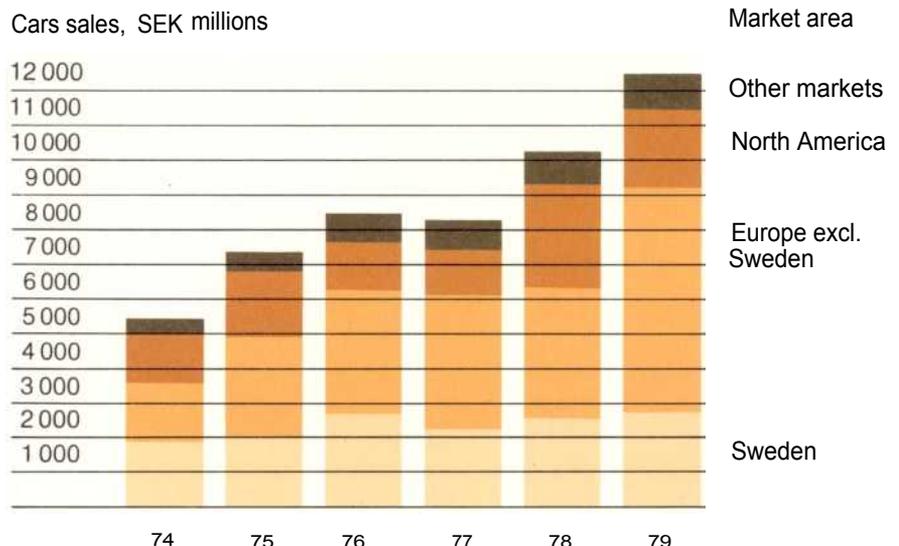
Rapid growth - particularly in Europe

The growth of the Volvo Car Corporation during the last five years has taken place primarily in Europe. This table shows the sales values for 1974-1978 within Volvo's market areas.

The term "other markets" covers a large number of countries primarily those in Asia, Africa and South America. Japan, Nigeria and Australia are the three major Volvo markets within this area.

Service and parts

Service and parts accessibility play a significant role in the marketing of cars. The Volvo dealer network assures the customer of an efficient service organization and reliable access to parts. In Europe alone, excluding the Nordic area, Volvo has approximately 1,500 dealers.





The car and society - Volvo's viewpoint

- All over the world, the car is the major mode of transport for people. More than 30 million cars are built each year throughout the world.
- Together, the automotive industry and motorism comprise a driving force in the economy of most industrialized countries.
- The car is a necessity if our society is to function, if we are to enjoy the freedom of being able to choose where we live and how we spend our leisure time.
- Volvo not only considers that one of its responsibilities is to ensure that its products are practical as a mode of transportation, but also that they function in the widest perspective – within our environment.
- Volvo alone cannot solve the environmental problems associated with motor vehicles. Society bears the main responsibility for developing our transport systems. However, Volvo plays an active part by contributing with viewpoints and proposals on matters ranging from exhaust gases to noise and energy consumption.

VOLVO

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