

VOLVO Car Division





This is the Volvo Car Division

The Volvo Car Division comprises the largest product sector within the Volvo Group. Of the total Group sales in 1974 of Skr. 10,500 million, the Car Division was responsible for Skr. 5,600 million.

Since January 31, 1975, Volvo Car B.V. in Holland (formerly DAF Car B.V.) has been included in Volvo's car operations. Volvo Car B.V. achieved sales of Skr. 900 million during 1974.

Approximately 35,000 people work within Volvo on the development,

production and marketing of the car programme. To these can be added a further 1,500 who work for Volvo's sub-contractors.

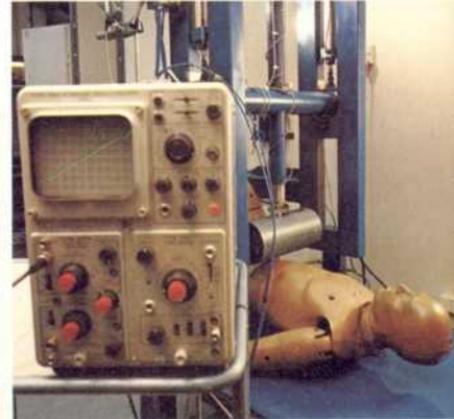
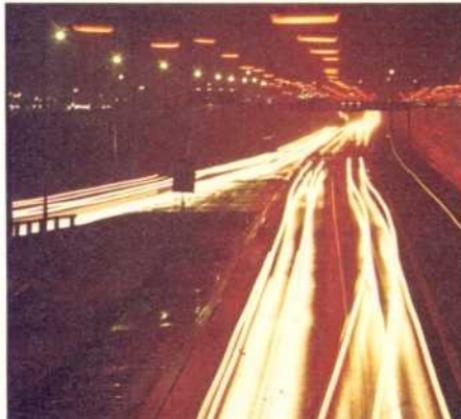
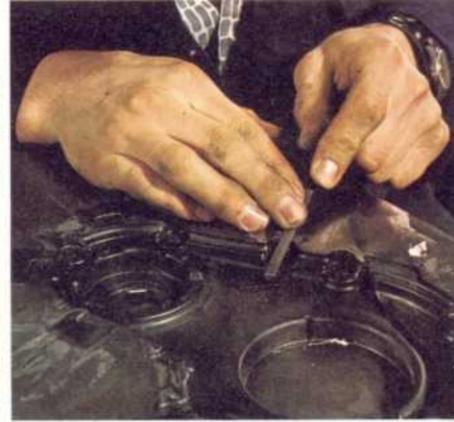
Volvo is a Swedish company with international aims. The major part of Volvo car production, including the assembly of 165,000 cars, is based in Sweden. A further 70,000 units are assembled in Belgium, Canada, Australia and Malaysia. Volvo Car B.V. in Holland contributes with an additional 70,000 cars. In the USA, a new assembly plant will be in production by 1977.

The Car Division intends to continue its well-balanced expansion.

Volvo cars are sold in almost 100 countries. The emphasis in our sales lies on the Nordic markets, Western Europe and North America.

Quality, safety, economy and comfort - these are the four fundamentals of our product philosophy. By way of intensive research and design work, the Volvo Car Division adapts its products to the requirements and traffic environment of today and tomorrow.

The car and society



the way we see it



The modern car is an efficient means of transport. Today, the car is a necessity if our society is to function.

The way we see it, our responsibilities involve more than just building good cars, we must also ensure that they fit into a larger context - that of our environment. The main responsibility for environmental matters and transport policies belongs to our society. Volvo's endeavour is to make an active contribution in the form of viewpoints and real-life solutions.

A living urban environment, worthy of mankind, can be combined with efficient transportation. New designs have made the car safer and more compatible with the environment and in many cases, Volvo has been a leader in these developments.

The car gives us independence and a freedom of movement which earlier generations never enjoyed. The demand for this way of life will certainly increase. Since there is no realistic alternative to the car, these two developments must go hand in hand.

However, the car also has obvious disadvantages. Pollution, traffic injuries, congestion and so on. These disadvantages must be restricted - it is Volvo's intention to participate actively in this work.



The techn

This is the Technical Centre of the Volvo Car Division. It is here in Gothenburg that Volvo's engineering advancements and new car designs are born.

The Technical Centre was opened in 1972 - putting the combined development and research re-

sources of the Car Division under one roof. This complex is Volvo's biggest investment in a single project and called for capital expenditure exceeding Skr. 220 million. Roughly 1,200 people work in the technical departments, the laboratories and the experimental workshops. The management and ad-

ministration of the Car Division is also based here.

The demands made on the car are ever increasing. They include customer requirements and the need to meet tough international competition, they also include safety and environmental requirements as stipulated by the authorities. In



ical centre

In addition, the growing complexity of the traffic environment also has an influence on the design of the car.

These demands call for advanced technical resources which the Volvo Car Division has in its Technical Centre. Within the Centre, we seek to simulate realities. Our

facilities enable us to create conditions just as arduous as the heat of the desert or cold of the arctic. Our engines and transmissions are put through test programmes which, through the use of computers, can be repeated identically, time and time again. We can also simulate road accidents in our car safety

centre and assess the ability of the car to protect its occupants. Our numerous laboratories test and evaluate the components of the car under every conceivable type of stress. And all of this takes place under strict control, a necessity in the science of accelerated testing to give quicker access to new designs.



The proving ground

Design work starts at the drawing board. These drawings result in a prototype which is tested in our laboratories. But laboratory tests are not enough - they must be followed by road tests under true-to-life conditions.

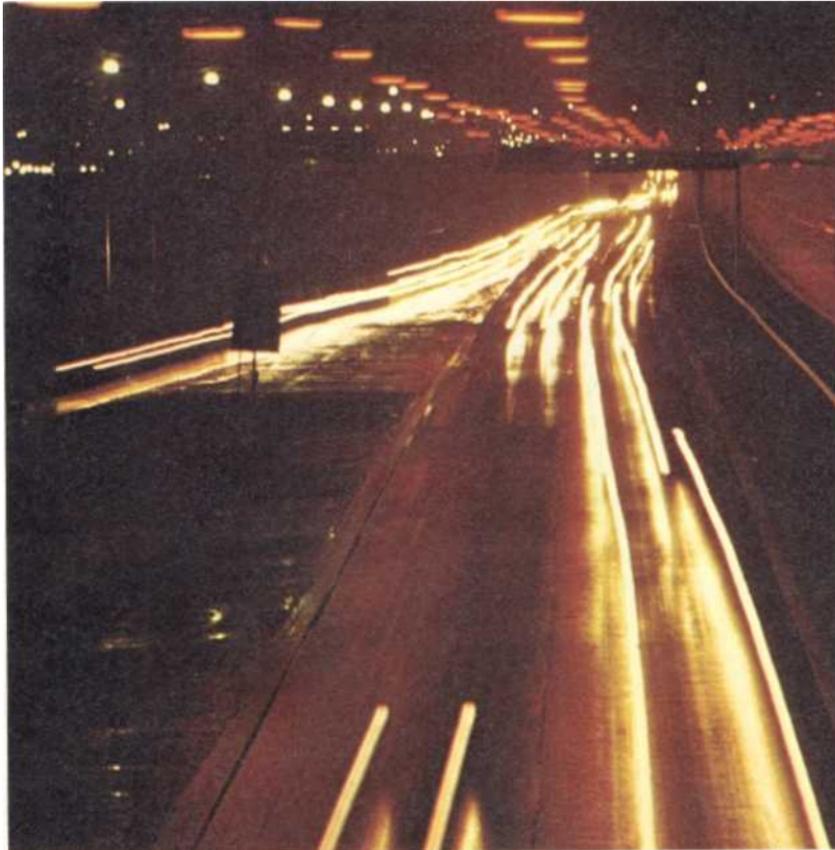
The Volvo proving ground is at Hällered, a few miles outside of Gothenburg. This facility cost approximately Skr. 50 million. But it was money well spent. The experience gained at Hällered is fed back to our laboratories and used in the continuing research and development work.

The main track at the Hällered proving ground is 6.2 kilometres long. It is used for long-term and high speed tests. Totally, the tracks of the proving ground are 26 kilometres long and are designed to simulate every type of road surface. The steering gear, shock absorbers and suspension take more punishment during a few short days of testing here than they would during years of normal use. The mud and salt water troughs give Volvo rustproofing a baptism of fire.

Special sections of one track are sprayed with water to give slippery road conditions even in the middle of summer. Very steep hills are used to test clutches and handbrakes to breaking point.



Experience guides our development



We study the needs of the consumer and his wishes in the many areas of our business. Legislative requirements concerning safety, driver training, speed limits and so on also have an influence on development. Extensive studies and market research are carried out regularly.

Through the Volvo workshops and the statistics received from many countries, we have access to a continuous stream of facts which tell us what happens to our cars in the field.

Another example of our follow-up activities is the work carried out by Volvo's traffic accident investigation researchers. Volvo cars which have been involved in a road accident are carefully examined by the researchers. They work in close cooperation with doctors, the police, salvaging companies and the authorised Volvo workshops. Their reports, for example, on the protective effect of seat belts, have had a considerable influence on the safety legislation in a number of countries.





Quality means more than long life

What do Volvo's resources within research and development mean in more concrete terms to car design? On the next few pages, we would like to tell you a little more about our basic objectives.

At Volvo, quality is a key word. It is also a word which has many meanings. Operational reliability and stamina, comfort in driving and travelling, road safety, economy and so on.

Volvo cars are designed and built on a foundation of very tough

quality requirements. Our norms not only cover the quality of the individual component or material, but also the complete car and its fundamentals of design.

Volvo cars have a long service life. In Sweden, all road vehicles, older than two years, are checked annually by the non-partisan Swedish Motor Vehicle Inspection Company. Their statistics prove that a Volvo has the longest probable life expectancy of any make of car sold in Sweden. After 16.6 years, half of

all the Volvo cars sold were still on the road. This is about two years longer than the average car. And we think it is ample proof of Volvo quality.

The way Volvo looks at quality means that we are fully prepared to accept the consequences of and responsibility for our products. The willingness to admit a quality obligation also implies the willingness to admit a weakness in a product and endeavour to see that this weakness is eradicated.

Total economy

Car economy can be discussed from many viewpoints. At Volvo, we have always tried to make overall appraisals.

The basic factors include what demands one makes on a car, what services one expects of it. The larger type of car can offer more in matters of safety, space and comfort than the smaller car.

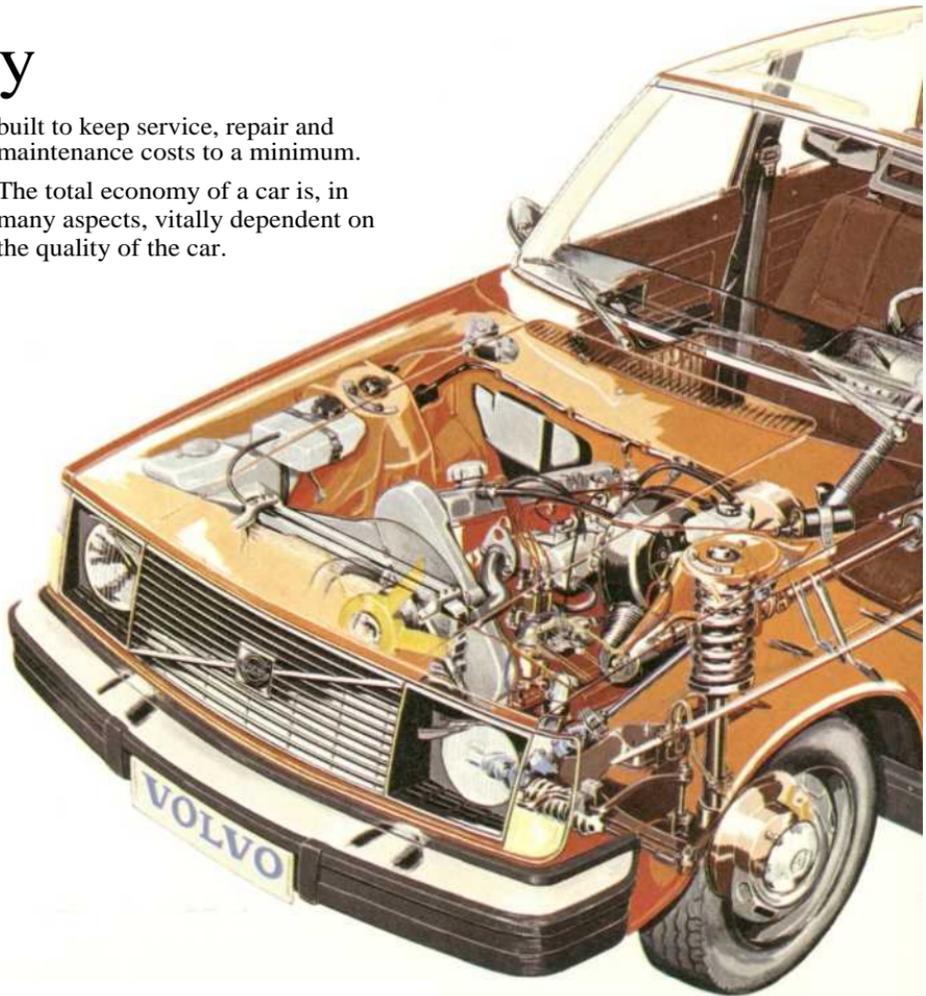
Many factors are involved in the overall economy of a car - the buying price and the trade-in value, fuel consumption, repairs, taxes and insurances, etc.

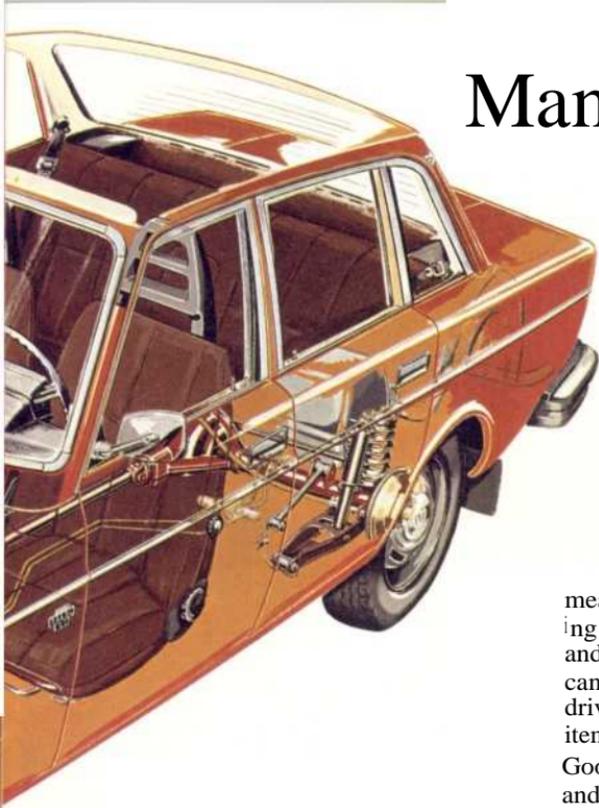
However, there are also a number of other questions which have a decisive effect on the total economy - factors such as service intervals, access to authorised workshops and the availability of replacement parts.

A Volvo is designed to give many years of reliable motoring. It is

built to keep service, repair and maintenance costs to a minimum.

The total economy of a car is, in many aspects, vitally dependent on the quality of the car.





Man, the car, and the traffic environment

Man, the car, and the traffic environment are the three factors which make up road safety. As a motor manufacturer, we concentrate on the car.

A safe car must reduce the risk of an accident. Plainly speaking, this

means, for example, that the steering and suspension must be good and predictable so that the car cannot unpleasantly surprise its driver. Brakes are another vital item.

Good visibility and ample heating and ventilation also reduce the risks of driving as does powerful and correctly designed lighting.

A safe car must also minimise the chance of injury if a collision should take place. The Volvo 240/260 Series have a safety body with energy-absorbing crumple

zones front and rear and heavy tubular members in the doors which protect the occupants against side impact. The steering column collapses under heavy impact and the steering wheel is designed to minimise injury. The outer shape of the car is also based on safety - the safety of other road users, especially the unprotected categories such as cyclists, pedestrians, etc. Possibly of more importance than anything else with regard to safety are the inertia reel, three-point seat belts fitted to Volvo cars. Volvo has had three-point seat belts as standard since 1959 - longer than any other motor manufacturer.

The crash tests we have carried out with the cars of the 240/260 Series show that they more than well conform with the very tough American safety requirements existing now and also those pending for future legislation.

Comfort and performance

Safety and comfort go hand in hand. Good visibility and ventilation, plenty of room, good road holding, conveniently used seat belts and so on are all important to safe and comfortable driving. And they are all a part of Volvo's quality thinking.

The driving seat of the 240/260 Series is an excellent example. Designed in cooperation with medical experts, adjustable height, infinitely variable backrest angle, fully adjustable lumbar support, built-in head restraints on all models, designed to make even long distance driving a pleasure. On markets which have colder winters, the driving seat incorporates a heating unit. This heating unit is thermostatically controlled and switches on when the temperature of the seat is below 14° C and heats it up quickly to 27° C before switching off again.

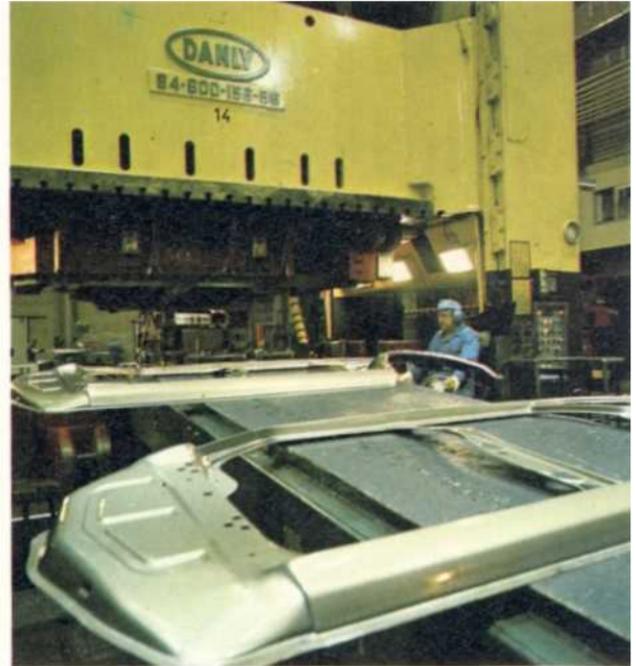
Comfort requirements differ considerably. To satisfy all categories, Volvo has invested in a very high level of comfort. Within this framework Volvo offers a wide range of choice. The Volvo car programme is very comprehensive. A versatile range of equipment, engines and transmissions enables us to satisfy the needs and wishes of practically any motorist.



This is how a Volvo is built



The materials and components flow into the assembly plant from our own factories and sub-contractors.



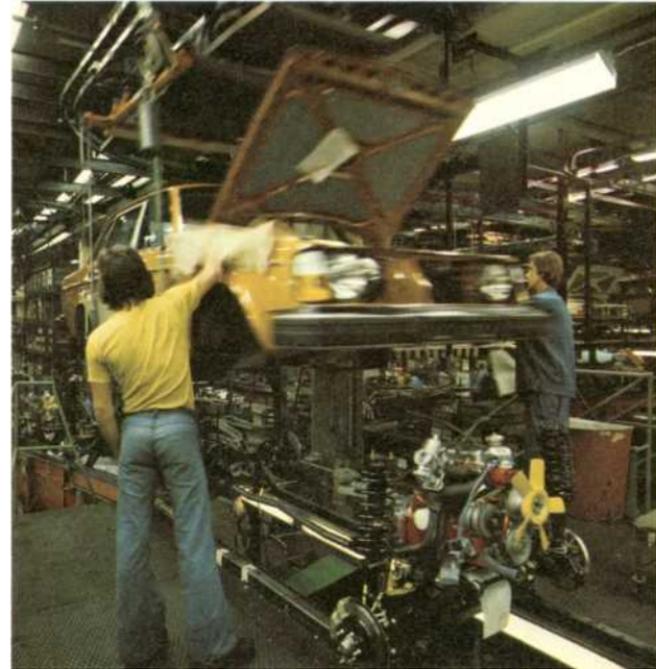
The actual production starts in the pressing shop where sheet-metal is formed into components for the Volvo body which consists of about 330 different parts.



In the body shop, these many metal pressings are welded together. The automatic welding equipment places the welds with fantastic accuracy. And each one of these welds is strong enough to carry the weight of the entire body.



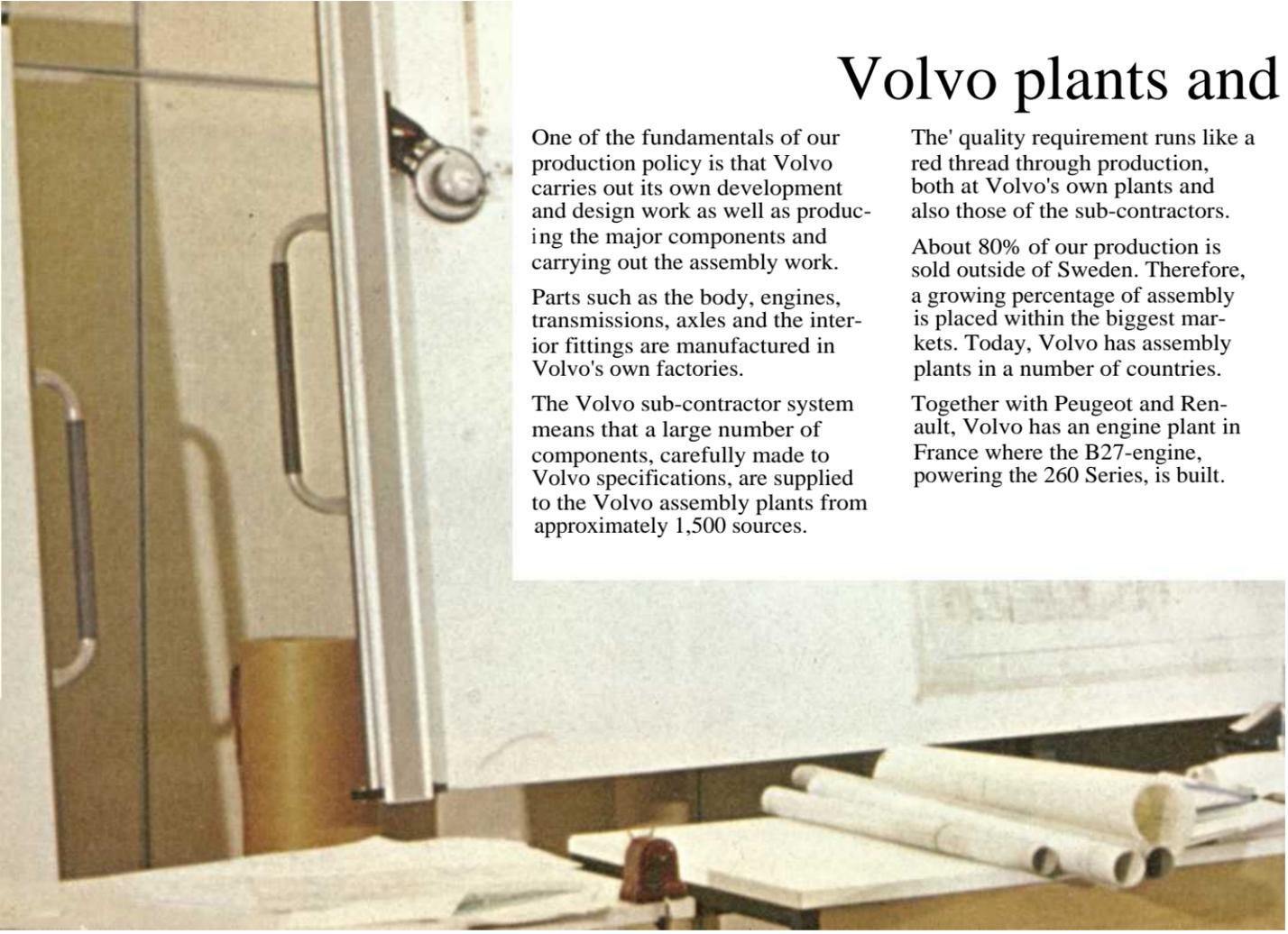
The body then moves on to the paintshop where it is degreased and specially treated to improve paint adhesion. Primer painting, oven hardening, rubbing-down and spray painting are carried out to particularly high standards. This is followed by very extensive rustproofing treatment which includes using both fluids and compound.



The body then moves on to the final assembly shop where the engine, wheels, electrical system and all the many thousands of other parts are fitted.



And throughout production, a very careful check is kept on quality. After final adjustment and testing on a rolling road, a new Volvo is ready for delivery.



Volvo plants and

One of the fundamentals of our production policy is that Volvo carries out its own development and design work as well as producing the major components and carrying out the assembly work.

Parts such as the body, engines, transmissions, axles and the interior fittings are manufactured in Volvo's own factories.

The Volvo sub-contractor system means that a large number of components, carefully made to Volvo specifications, are supplied to the Volvo assembly plants from approximately 1,500 sources.

The quality requirement runs like a red thread through production, both at Volvo's own plants and also those of the sub-contractors.

About 80% of our production is sold outside of Sweden. Therefore, a growing percentage of assembly is placed within the biggest markets. Today, Volvo has assembly plants in a number of countries.

Together with Peugeot and Renault, Volvo has an engine plant in France where the B27-engine, powering the 260 Series, is built.

sub-contractors

Thanks to Volvo's success on many markets, production and also the number of jobs - both in Sweden and abroad - has increased vigorously. This implies still greater requirements on Volvo. Both from society and from the indivi-

dual employee. An extensive social responsibility is an important part of Volvo policy. Working in close co-operation with the employees, the Company improves working environment and introduces new types of work organisation.



Production

Volvo's Swedish-based plants involved in car production are the following:

Volvo Skövde Plants

The Skövde Plants manufacture engines for Volvo cars, trucks and buses. This facility has one of Europe's most modern foundries. The Skövde Plants also include a factory at Floby which manufactures, among other things, brake discs and wheel hubs.

Volvo Olofström Plants
Scandinavia's leading metal pressings industry. In addition to metal pressings, the company also produces pressing tools and special machines for welding.

Volvo Dalsland Plants
This group makes upholsteries, seat belts and injection moulded plastics components at its factories in Bengtsfors, Färgelanda and Tanumshede.

Volvo Bergslagen Plants

A special factory for transmissions, front and rear axles and front suspensions is situated in Köping. Another in Arvika makes forgings for the Volvo Car Division.



in Sweden

Volvo Torslanda Plant

The Torslanda Plant in Gothenburg is the Group's biggest assembly facility with its 8,500 employees. This complex includes: Pressing Shop, Body Shop, Paintshop, and Assembly Shop. Its capacity is approximately 850 complete cars per day and an additional 150 painted bodies. These separate bodies, together with other components, are sent to various destinations, including the assembly plants at Kalmar and in Canada.

Volvo Kalmar Plant

In many ways, the Kalmar Plant is a unique assembly facility with regard to the techniques used, working environment and the labour organisation. It was inaugurated in 1974 and now produces approximately 30,000 cars per year operating a single shift.

Most of the work is carried out in groups of between 15 to 20 workers. The bodies are transported throughout the plant on battery-powered and individually controlled carriers which, together with the buffer zones arranged between each group, help the teams to determine the rate at which they work and the methods used.



Production outside Sweden

In early 1975 Volvo took over the share majority of Volvo Car B.V. (formerly DAF Car B.V.), which represented a considerable strengthening of our resources, partly through the first-class facilities of the plant at Born in the Netherlands, and partly through the resulting broadening of the car programme by the Volvo 66 - Volvo's new medium size car. The Born facilities produced approximately 70,000 cars in 1974. Volvo Car B.V. also includes a

newly built plant at St Truiden in Belgium, which builds the special automatic transmission for the Volvo 66 - as well as other components.

Volvo Europa in Ghent, Belgium is the second of Volvo's large assembly plants in Europe and it provides, among others, the growing European market with its needs of Volvo 240/260 Series cars. In 1974, production reached 50,000 units.

There are also facilities in Melbourne, (Australia), Kuala Lumpur, (Malaysia), Halifax, (Canada) and Djakarta, (Indonesia).

Volvo is also the first non-American motor manufacturer to build a car assembly plant in the USA. This will be at Chesapeake, Virginia and the new venture is expected to be on stream during the first six months of 1977. It will have an initial capacity of 10,000 cars per year working on a one-shift basis.

In 1976, a small assembly plant will be opened in Bangkok, Thailand.



Worldwide marketing

The products of the Volvo Group are sold in more than 160 countries around the world. The sales network for the products of the Car Division is continuously growing. It now covers about 100 countries.

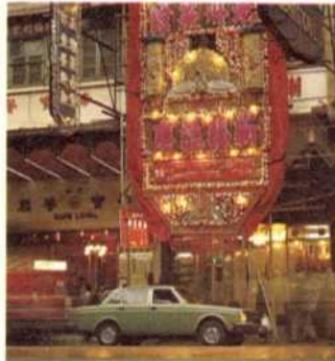
The Volvo Car Division operates within four large market blocks: 32% of production is sold in the Nordic countries, 26% in the remainder of Europe, 33% in North America and 9 % in the group of countries known at Volvo as the

Overseas Market. Between 1960 and 1974, Volvo car sales increased from 80,000 to 237,000 units. The North American and European markets showed the fastest growth.

Volvo's marketing strategy includes an increased investment in the major European and North American markets as well as certain markets in Asia and Australia to strengthen our footholds abroad.

The marketing of our products is carried out through our own subsidiaries as well as by independent importers.

In many countries, Volvo and its various importers have their own import facilities. In recent years, import facilities have been opened in Switzerland, Finland, West Germany, France, the Netherlands and the USA.



Parts, accessor

Every single Volvo product is subject to rigorous control during production and before delivery. These quality control methods are used just as extensively on Genuine Volvo Parts. Use of these parts gives the Volvo customer the possibility of keeping his car in perfect condition, thereby increasing the service life and the overall economy of motoring. A wide range of accessories specially designed for Volvo cars is also marketed.

The Volvo Parts Division is responsible within the Group for the procurement, quality control, marketing and distribution of Genuine Volvo Parts and Accessories. With the assistance of advanced computer systems, the Volvo Parts Division monitors the stock requirements of both the importers and also many dealers. The central warehouse in Gothenburg carries a stock of 85,000 different parts. A



ies and service



central warehouse in Ghent, Belgium, meets the needs of Volvo's other markets.

Before we start to sell cars on a new market, we build up a good stock of parts and establish authorised Volvo workshops staffed by trained mechanics and equipped with special tools.

Each importer is responsible for servicing matters on his market. In

addition, the Volvo Car Division has a special central unit for service matters. This department produces the driver instructions, workshop manuals and other technical publications and is also responsible for the training of instructors for the importer service schools. Our field department, staffed by specially trained service inspectors, is responsible for contacts with the dealer network and with our customers throughout the world.



A car for every requirement

The Volvo car programme comprises three series, the 240 and 260 Series, and the Volvo 66. Together, these fine cars cover a very wide register of requirements.

The Volvo 66 is a new addition to the 1976 Volvo programme. The Volvo 66 is available in four versions - a Sedan (two-door) and a Station Wagon (three-door), each of which is available in a DL and GL-version. The GL-versions have a more powerful engine: 57 hp DIN compared with the 47 hp DIN of the DL-models. In addition, the

GL has auxiliary halogen lights recessed into the grille and a wider size of tyre. The Volvo 66 is the result of many years' development work between the Volvo engineering departments in Gothenburg and Eindhoven, work in which the emphasis was placed on matters of safety.

The Volvo 240 Series comprises Sedan and Station Wagon models as well as a range of special purpose vehicles. These cars are available in L, DL and GL-versions, the difference lying in the equip-

ment and engines, from the B20A, giving 82 hp DIN to the B21E with fuel injection and an output of 123 hp DIN.

Top of the Volvo range is the 260 Series, available as a four-door Sedan and also as a five-door Station Wagon.

The Sedan models are available in both DL and GL-versions. The Volvo 260 Series is powered by a V6 engine of 2.7 litres displacement which develops 125 hp DIN (carburetor version) and 140 hp DIN (fuel injection version).

Scandinavia's biggest engineering industry

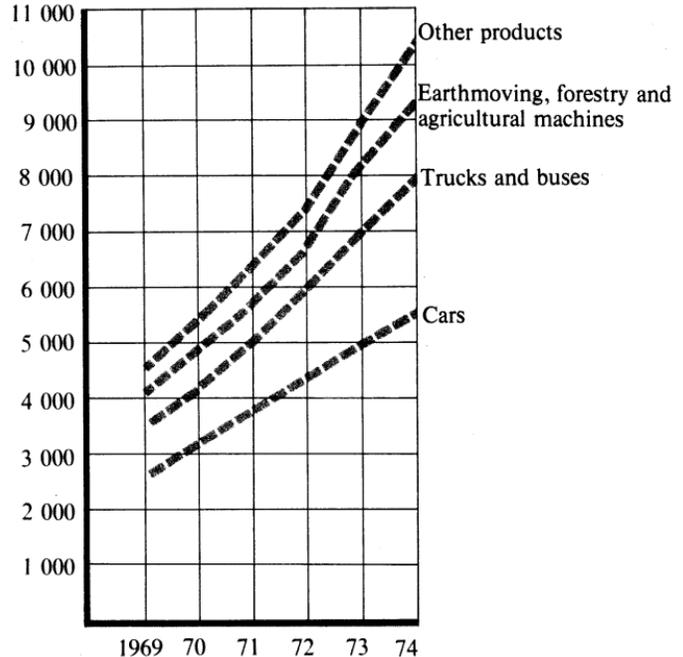
Volvo is Scandinavia's leading engineering industry. Volvo manufactures over 100 products, primarily for the world of transport. They are sold in more than 160 countries.

The product units of the Volvo Group are:

- Volvo Car Division
- Volvo Car B.V. (since January 31, 1975)
- Volvo Truck Division
- Volvo Bus Division
- Volvo Penta (industrial and marine engines)
- Volvo BM (earthmoving, forestry and agricultural machines)
- Volvo Flygmotor (jet engines, hydraulic machines and environmental products)
- Jofa-Företagen AB (recreational and sports articles)

Sales in 1974 amounted to more than Skr. 10,500 million. Number of employees - 56,000. Earnings before allocations and taxes amounted to Skr. 737 million.

Sales, Skr. millions



facts

Increasing investments

Volvo's capital expenditure is increasing continuously. In 1970, the Company invested Skr. 478 million. By 1974, the corresponding figure was Skr. 871 million.

Among the larger capital expenditures authorised for 1974-75 was an assembly plant for cars in Virginia, USA. Authorised investments for improvements to environment within the Group amount to almost Skr. 50 million.

Volvo Group capital expenditure in plant and facilities and acquisitions.
Skr. millions.

1970	1971	1972	1973	1974
478	637	657	769	871

Volvo - owned by many

The number of people holding Volvo shares is considerable. In fact, Volvo has 117,000 shareholders. The smaller and medium sized holdings (up to 1,000 shares) account for 58% of the share capital. The biggest shareholder (Fourth National Pension Insurance Fund) holds less than 5%. Volvo is therefore free from dominating owner interests.

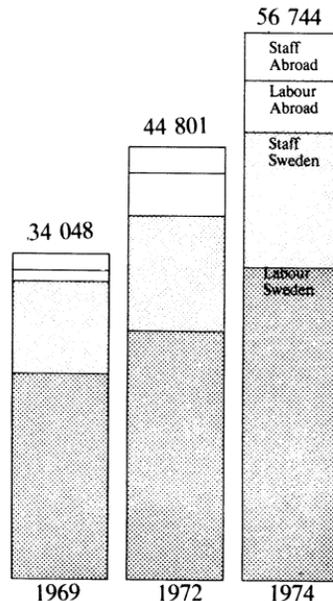
Volvo shares have been listed on the Stockholm Stock Exchange since 1935, on the London Stock Exchange since 1972, and on the Stock Exchanges of Dusseldorf, Frankfurt/Main and Hamburg since 1974.

The share capital, after the 1975 bonus issue, amounts to approximately Skr. 785 million.

Shareholdings	No. of share holders	% of share capital
Max. 100 shares	96,600	21.7
101-500 shares	17,000	26.7
501-1000 shares	2,000	10.5
1001-10,000 shares	1,100	17.8
More than 10,000 shares	48	23.2

More than 56,000 employees

Volvo's labour force increased by 22,700 between 1969 and 1974. About 46,000 of the total number of employees work in Sweden, 10,500 working within Volvo operations abroad.

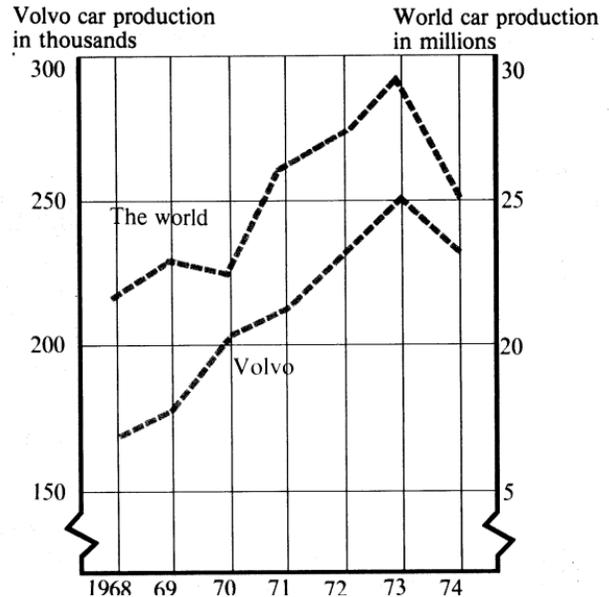


AB Volvo

Some interesting Volvo milestones

- 1924 Founders of the Company, Gustaf Larson and Assar Gabrielsson start work on the very first Volvo.
- 1927 Jacob - Volvo's first series-manufactured car is ready. The four-cylinder engine of 28 hp gives the car a maximum speed of 60 km/h.
- 1944 The almost legendary PV 444 sees the light of day. This very popular car remained basically unchanged for more than 20 years.
- 1956 The Volvo 121/122S Series was introduced.
- 1959 Production start-up of the Volvo P1800 sports car.
- 1966 The first of the Volvo 140 Series leave the assembly lines.
- 1974 The new generation of Volvos, the 240 and 260 Series are introduced.
- 1975 Volvo 66 - the new medium sized Volvo enters the scene.

Volvo production compared with world production



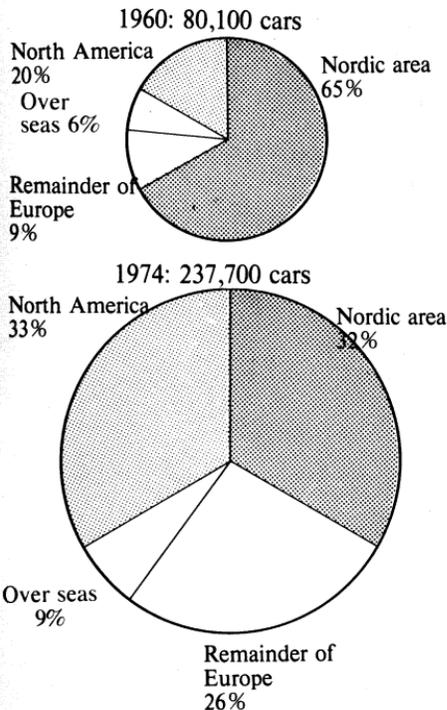
During 1974, Volvo decided to reduce its car production to a level slightly above that of 1972. In percent, world figures dropped more, falling below the 1971 level. Relatively speaking, therefore, Volvo improved its position.

Volvo Car B. V., presented on the next spread, is not included in the figures shown here.

Car Division

Volvo's four major market blocks

Car sales 1960 and 1974



Volvo assembly plants

Production 1974

Volvo Torslanda Plant, Sweden	1 56 400
Volvo Europa NV, Belgium	49 600
Volvo Canada Ltd., Canada	10 100
Volvo Kalmar Plant, Sweden (opened spring 1974)	9 100
Volvo Australia Pty. Ltd., Australia	3 800
Swedish Motor Assemblies SDN, Malaysia	1 600
Importer make-up in other markets	—3 600— 234 200

The top ten markets

Number of cars registered 1974

Sweden	56,900
USA	50,100
Great Britain	17,700
Canada	10,200
West Germany	9,100
Norway	8,000
Belgium	7,300
Switzerland	6,600
Australia	6,400
Austria	4,500

Volvo Car B.V

A background

Since 1972, Volvo has gradually increased its shareholding in DAF. In early 1975, Volvo acquired the share majority of DAF Car B.V. which, during the spring of that year changed its trading name to Volvo Car B.V.

Through this acquisition of 75% of the share capital, the Volvo car programme was increased in scope. This implies a more comprehensive product programme and a higher turnover for the Volvo importers and dealer network. Volvo Car B.V. brings to the Group a modern production apparatus; skilled personnel and a new product programme - the Volvo 66 Series.

The marketing organisation of Volvo Car B.V. was strengthened during 1975 by integrating its sales companies with the Volvo sales companies or with independent importers in the various countries.

Facilities

The main Volvo Car B.V. assembly plant is situated in Born, the Netherlands. A plant at Sint Truiden, Belgium manufactures a number of components such as engines, transmissions, steering gears and braking systems.

Certain parts of the automatic transmission are also made in Eindhoven in the Netherlands.

In 1974, production reached 70,000 units and about 6,000 people were employed.

DAF Car B.V.'s net sales in 1974 amounted to almost Skr. 900 million.

The biggest markets

Number of cars registered 1974.

The Netherlands	20 200
West Germany	11 900
Great Britain	8 500
Belgium	8 300
France	7 400
Sweden	4 000
Italy	2 900

Volvo organization

