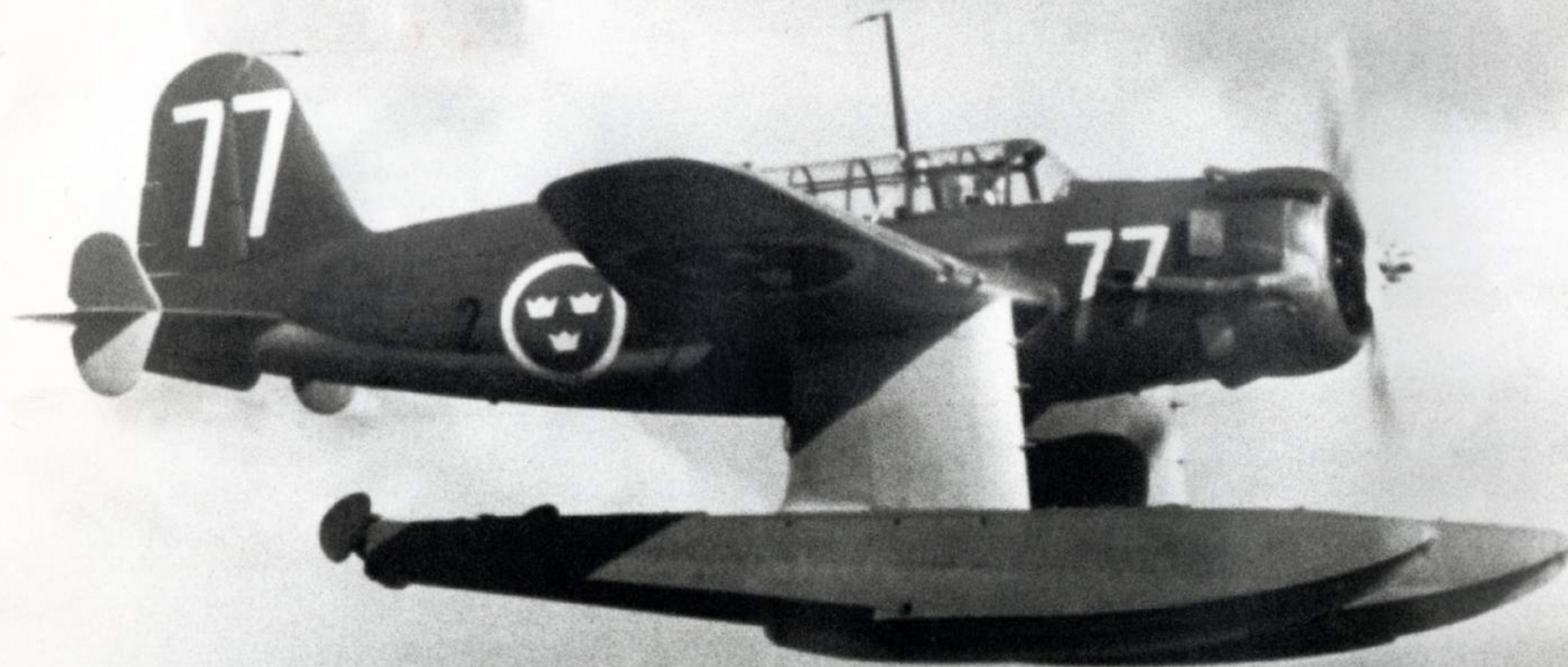




THE UNDERLYING PRINCIPLE



Saab 17

The first Saab-designed aircraft, the Saab 17 was an all-metal single-engined two-seater, which was very advanced in several respects. It first took to the air in the spring of 1940. The 17 was originally designed for reconnaissance, but was later produced as a dive

bomber. It proved to be a very versatile aircraft featuring ordinary landing gear, floats or skis. Manufacture of the Saab 17 ended in 1944, with total production being 325 units. The Saab 17 remained in service until 1948.

Overall length: 7.0 m. Height: 2.6 m. Wingspan: 8.85 m. Max. take-off weight: 1,000 kg. Max. speed: 248 km/h. Cruising speed: 220 km/h. Rate of climb: 5.4 meters per second. Take-off run: 150 m. Landing ground roll: 140 m.

The Birth of Saab

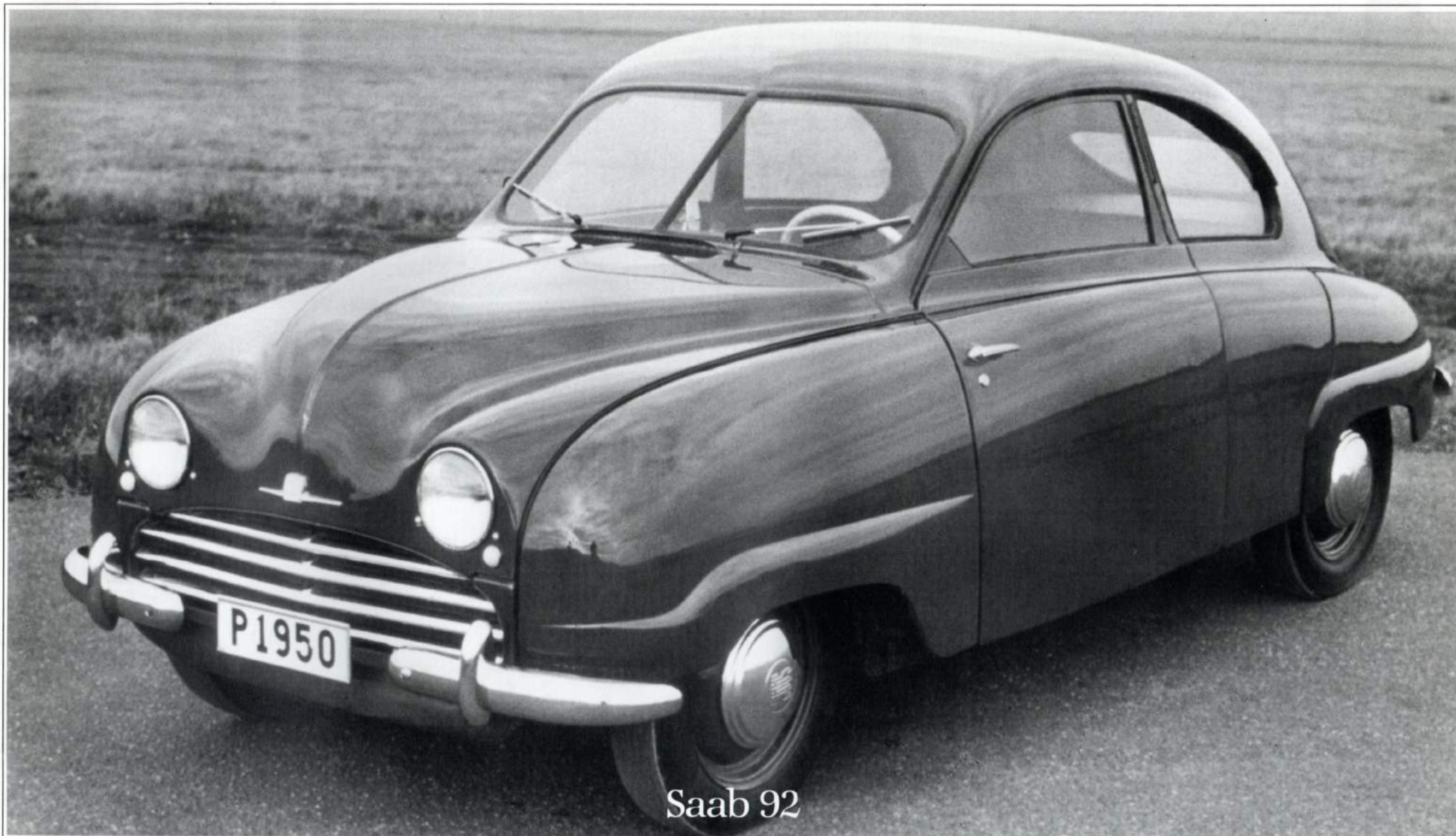


Saab 21

The Saab 21A was the only twin-boom pusher-propeller aircraft to be built in quantity during World War II. Its design was unconventional, with the engine and propeller placed behind the pilot. The all-metal single seater was used primarily as an attack fighter but it also served as an attack aircraft equipped with bomb-racks and pylons. The plane, which was under production

from 1944 to 1949, was characterized by its excellent visibility for the pilot and its remarkable air stability, which made it an excellent firing platform. It was also one of the first aircraft to be fitted with an ejection seat. Saab entered the jet age in 1947 with a jet version of the 21, designated the Saab 21R.

Overall length: 10.45 m. Height: 3.97 m. Wingspan: 11.60 m. Max. take-off weight: 4,150 kg. Max. speed: 640 km/h. Cruising speed: 520 km/h. Landing speed: 145 km/h.



Saab 92

Designed by two aeronautical experts, the first Saab car had many unique features. Introduced as an economical everyday car in 1949, the front-wheel drive 92 counted on aircraft techniques to solve automotive problems. By using monocoque body construction, the 92 was more rigid and weighed less than other cars in its class. Its uncommon aerodynamic design allowed the

92 to obtain the remarkably low drag coefficient of 0.30, a figure rarely reached today. The aerodynamic design enabled the car to attain better speeds. And the front-wheel drive design provided more cabin space for passengers, which made it one of the most comfortable cars in its class.

Transverse mounted two-stroke two-cylinder water-cooled engine overhanging the front axle. Rating: DIN 25 bhp at 3,800 rpm. Three-speed gearbox with free-wheel drive and column-mounted lever. Independent wheel suspension with transverse torsion bars. Rack and pinion steering. Overall length: 3,910 mm. Width: 1,620 mm. Height: 1,420 mm. Unladen weight: 762 kg. Maximum speed: 105 km/h.



Saab 29

Nicknamed Flygande Tunnan (The Flying Barrel), the Saab 29 was the first European swept-wing fighter to enter service. It made its maiden flight on September 1, 1948. The plane was a tremendous success among the pilots of the time. The plane was characterized as docile, extremely agile and second to none in

performance. It had an exceptional rate of roll and turning radius and excellent stability as a gun platform. The 29s were used for ground attacks and reconnaissance. The Saab 29, which was regarded as one of Europe's most modern aircraft during the mid-1950s, set several circuit records. Over 660 units were produced.

Overall length: 12 m. height: 4.4 m. Wingspan: 10.9 m. Max. take-off weight: 7,936 kg. Max. speed: 1,072 km/h.



Saab 93

The Saab 93, which was introduced in December 1955, gave a real shot in the arm to sales of Saab cars. It was a refinement of the 92's concept of using aircraft aerodynamics and structural efficiency in the design of an automobile. The 93 received a new front end, new front and rear suspension using coil springs all-round,

U-shaped rigid rear axle, an improved cooling system, increased wheelbase and a new engine that was laid out longitudinally. Overall, its performance and handling features were improved over the 92's. The features made the 93 much more competitive. It was the first Saab car to be exported in numbers.

Two-stroke three-cylinder water-cooled in-line longitudinally-mounted engine. Rating: DIN 33 bhp at 5,000 rpm. Three-speed gearbox with free-wheel drive and column-mounted lever. Independent front and rear coil suspension. Rigid, U-shaped rear axle. Overall length: 4,010 mm. Width: 1,570 mm. Height: 1,470 mm. Maximum speed: 120 km/h.



Saab 32

The Saab 32 Lansen (The Lance) was the first transonic all-weather fighter-bomber to enter service in western Europe. It was the first Swedish aircraft with a built-in search radar, which made all-weather operation possible. Its advanced components marked Saabs entrance into the electronic age. The first flight of this

two-seat attack aircraft was November 3, 1952. It was powered by a turbojet engine. One year later, it was announced that the Lansen had exceeded the speed of sound, being one of the first in its class to be supersonic. The Lansen was ordered into quantity production the same year. A total of 450 Lansens were built in three

versions – attack, reconnaissance and fighter roles.

Overall length: 15 m. Height: 5 m. Wingspan: 13 m. Max. take-off weight: 10,000 kg. Max. speed: 1,125 km/h.



Saab 96

It was the 96 that brought worldwide attention to Saab cars. The 96, which was introduced in 1960, had a two-door fastback saloon shape with a smooth underside layout. Its improved suspension provided splendid roadholding ability. Its engine was enlarged to 841 cc, which boosted power to 38 bhp and top speed to 125 km/h. The 96 was acclaimed by the international motoring press for its handling features, its lively acceleration and its quietness at high speeds. The 96 was also a comfortable car. The backseat was enlarged by 250 mm, making it a true five seater. A new flow-through heating and ventilation system was installed.

Saab's diagonally split dual braking system (ensuring that at least 50 percent of the braking power would always be operative even if one of the circuits should fail) was introduced in the later models. Headlamp wipers, which help to increase visibility during stormy weather, were introduced during Model Year 1971. Performance was boosted with the addition of the V4 engine, which was used to power later models. The V4 engine gave Saab a new sound, more horsepower, lower fuel consumption and higher sales. For those who relished the pinging sound, models with the two-cycle engine were still available until 1967. More than half a

million Saab 96 saloons were built, and over a 100,000 Saab 95s (a station wagon version of the Saab 96) were produced.

Two-stroke three-cylinder in-line engine. Rating: DIN 38 bhp at 4,500 rpm. Three-speed gearbox with free-wheel drive and column-mounted lever (Four-speed gearbox introduced on the 1964 model). Independent front and rear coil suspension. Rigid, U-shaped rear axle. Overall length: 4,015 mm. Width 1,570 mm. Height: 1,475 mm. Maximum speed: 120 km/h.

Saab V4: New variant with four cycle V engine. 1,498 cc. DIN 65 bhp. Maximum speed: 145 km/h.



Saab 105

The Saab 105 is a multipurpose twin-jet trainer and strike aircraft that was initially developed as a private venture. The first prototype flew in June 1963. After extensive tests and evaluations, the plane was adopted for training and light attack by the Royal Swedish Air Force. The 105G, with improved aerodynamics,

powerful General Electric J85-17B engines and sophisticated electronics, was praised for its lively performance and high combat survival. The aircraft offered the widest range of weapon, endurance and performance alternatives of any light combat aircraft available during the early 1970s.

Overall length: 10.8 m. Height: 2.7 m. Wingspan: 9.5 m., Max. take-off weight: 6,500 kg (attack version). Max. speed: 970 km/h. Time to 10,000 metres: 5.5 minutes. Take-off ground run: 410 m. Landing ground run: 675 m.



Saab Sonett

The Saab Super Sport (later to be named the Sonett) was first displayed at the Stockholm Motor Show on March 16, 1956. This rakish two-seater had a fibreglass body that was simple and streamlined. It had very large wheel arches to accommodate the standard 15" diameter wheels. The chassis was designed along aircraft

principles. The car was compact and light. It took 34 seconds for it to make the standing kilometer. Interestingly, the Sonett did not have bumpers. To the dismay of many people eager for a Saab sports car, the original Sonett was not for sale. This caused quite a stir. Ten years later, limited produc-

tion was begun on the Sonett II and Sonett III (Saab 97).

Two-stroke three-cylinder longitudinally-mounted engine. Rating: DIN 57.5 bhp at 5,000 rpm. Four-speed gearbox with column-mounted lever. Overall length: 3,500 mm. Height: 8,250 mm. Unladen weight: 500 kg. Maximum speed: 210 km/h.



Saab 35

The mainstay of the Royal Swedish Air Force, the Saab 35 is a multipurpose all-weather aircraft that has attracted worldwide interest. Nicknamed Draken (The Dragon), the Saab 35 is a delta-winged supersonic aircraft for fighter, attack and reconnaissance missions. It is characterized by its low supersonic drag, its ability

to achieve very high speeds, its fail-safe structure and its ability to store fuel and equipment. Highly innovative, the 35 was equipped with a high pressure hydraulic system for full power assisted movement of the rudder and ailerons.

During its production stage, the Draken was perhaps

Europe's most complete integrated air defense system.

Overall length: 15.35 m. Height: 3.89 m. Wingspan: 9.40 m. Max. take-off weight: 15,000 kg. Max. speed with afterburner: Mach 2. Time to 11,000 m. with afterburner: 2.6 minutes. Take-off ground run with afterburner: 650 m. Landing ground roll: 530 m.



Saab 99

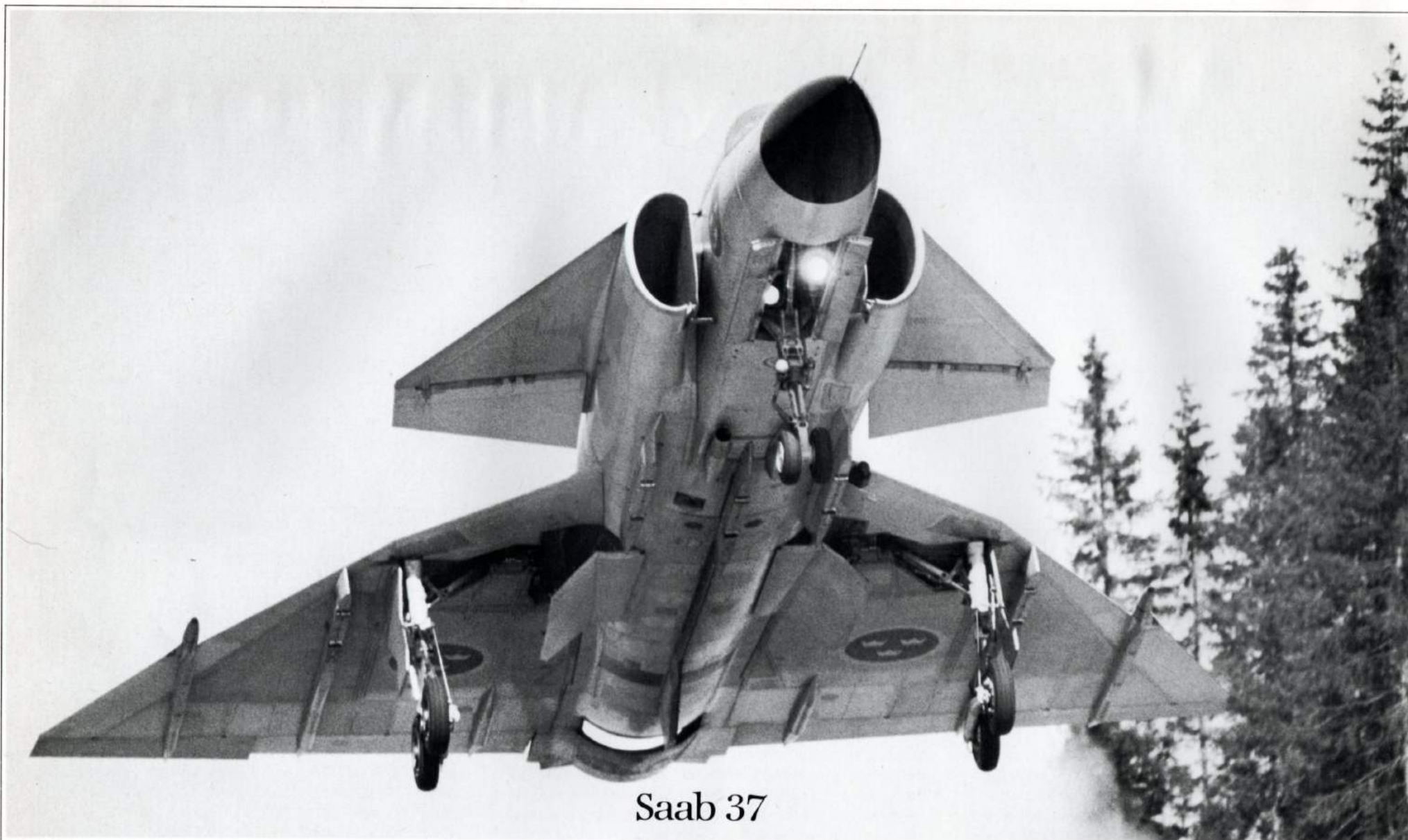
Saab entered the exclusive car segment in the summer of 1968 with the introduction of the 99 product line. During its lifetime, several versions of the 99 were manufactured. Each new version relied on the most advanced automotive technology available at the time to climb higher in the market segment. When the 99 made its debut, it offered a special Saab feature in its fold-down rear seat, which really made the car into a "semi" station wagon. It was the first Saab to be available as a four-door, to include an electronic fuelinjection system, to offer an electrically heated driver's seat and impact-absorbing bumpers. In 1972, Saab introduced the 99 EMS

(Electronic Manual Special) a deluxe two-door that was quick and exclusive in nature. In September 1977, the 99 Turbo was introduced. With the combination of good economy, a top speed of close to 200 km/h and fantastic acceleration, the car caused a considerable stir amongst the international motoring press and the public. The Saab 90, which is a descendant of the 99, is available on some markets today.

The Saab 99: Water-cooled engine with overhead camshaft. Initial rating: DIN 80 bhp. Four-speed gearbox with floor mounted lever. Coil spring suspension with front A-arms and rigid rear axle with trailing arms plus Panhard rod. Disc brakes on all wheels. Overall length: 4,354 mm. Width: 1,675 mm. Height: 1,440 mm. Unladen weight: 1,070 kg.

The Saab 99 EMS: Redesigned Swedish-made four-cylinder in-line engine with fuel injection system. Initial rating: DIN 110 bhp. Maximum speed: 155 km/h.

The Saab 99 Turbo (The First Generation Turbo): Four-cylinder in-line turbocharged engine with single overhead camshaft and Bosch K-Jetronic indirect fuel injection system. Rating: DIN 145 bhp at 5,000 rpm. Four-speed all-synchromesh gearbox with floor mounted lever. Rack and pinion steering. Maximum speed: 195 km/h.



Saab 37

The Saab 37 Viggen (The Thunderbolt) is one of the most advanced military aircraft in service today. It was first airborne in 1967. Production began in 1971. Unique design with a nose wing and separate delta wing, as well as very high thrust from the jet engine, gives the Viggen STOL (short take-off and landing) performance.

The Viggen is an all-weather multipurpose integrated system, which is designed to be built in five versions - attack, intercept, fighter, reconnaissance and training. Equipment flexibility enables the attack version to perform fighter missions. The Viggen has a thrust reverser to reduce landing distances.

Overall length: 16.30 m. Height: 5.60 m. Wingspan: 10.60 m. Take-off weight with normal armament: 16,000 kg. Max. speed with afterburner: Mach 2 (supersonic in under 60 seconds). Time to 11,000 m. with afterburner: under 2 minutes. Take-off ground run with afterburner approx: 400 m. Landing ground roll with thrust reverser: 500 m.



Saab 900

Saab rocketed straight into the luxury car class with the introduction of its 900 product line in 1978. The demand for the Turbo version was so great that exclusive cars were traded in for new Saab 900 Turbos. The entire 900 line has the same basic design of body, chassis and engine to ensure superb performance, roadholding, and comfort. In 1981, the Automatic Performance Control (APC) system was introduced in Turbo models. This microprocessor-controlled system was the first effective method of monitoring turbo boost as a function of

gasoline octane. Saab's emphasis on safety gave the 900 line some attractive features. A collapsible steering column and an energy-absorbing shield were designed to protect the driver in case of an accident. Self-repairing bumpers and electrically heated driver's seats were also featured. For Model Year '86, the 8-valve 900 Turbo is equipped with an intercooler, which boosts the horsepower to 155 making it one of the few high-performance two-door cars on the market.

Saab 900: In-line two-litre four-cylinder engine. Initial rating: DIN 100 bhp at 5,200 rpm. (118 bhp with fuel-injection engine). Four- or five-speed manual gearbox. Overall length: 4,740 mm. Width: 690 mm. Height: 1,420 mm. Maximum speed: 160–175 km/h. Acceleration: 0–100 km/h, 12.5–14.5 s.

Saab 900 Turbo: (The Second Generation Turbo): In-line two-litre four-cylinder engine with mechanical fuel injection and APC. Rating: DIN 145 bhp at 5,000 rpm. (with intercooler: DIN 155 bhp at 5,000 rpm) Five-speed manual gearbox. Three-speed Borg-Warner automatic transmission. Maximum speed: 195 km/h (automatic transmission: 190 km/h.) Acceleration: 0–100 km/h, 9.0 s. (automatic transmission: 11.5 s.)



Saab-Fairchild 340

The 340 is a twin-turboprop regional airliner and corporate aircraft. It is developed, produced and marketed jointly by Saab-Scania of Sweden and Fairchild Industries of the United States. The aircraft is technically advanced, highly economical and versatile.

It meets the growing demands for less expensive and more comfortable short distance flight transportation. The first order was placed during July 1982. The 340 marks the continuation of the Saab-Scania Aircraft Division's expansion into the civil aviation sector.

Overall length: 19.72 m. Height: 6.87 m. Wingspan: 21.44 m. Max. take-off weight: 12,247 kg. Cabin length (excluding flight deck): 10.39 m., Cabin width: 2.16 m. Cabin height: 1.83 m. Max. cruise speed: 507 km/h. Range with 35 passengers: 1,500 km.



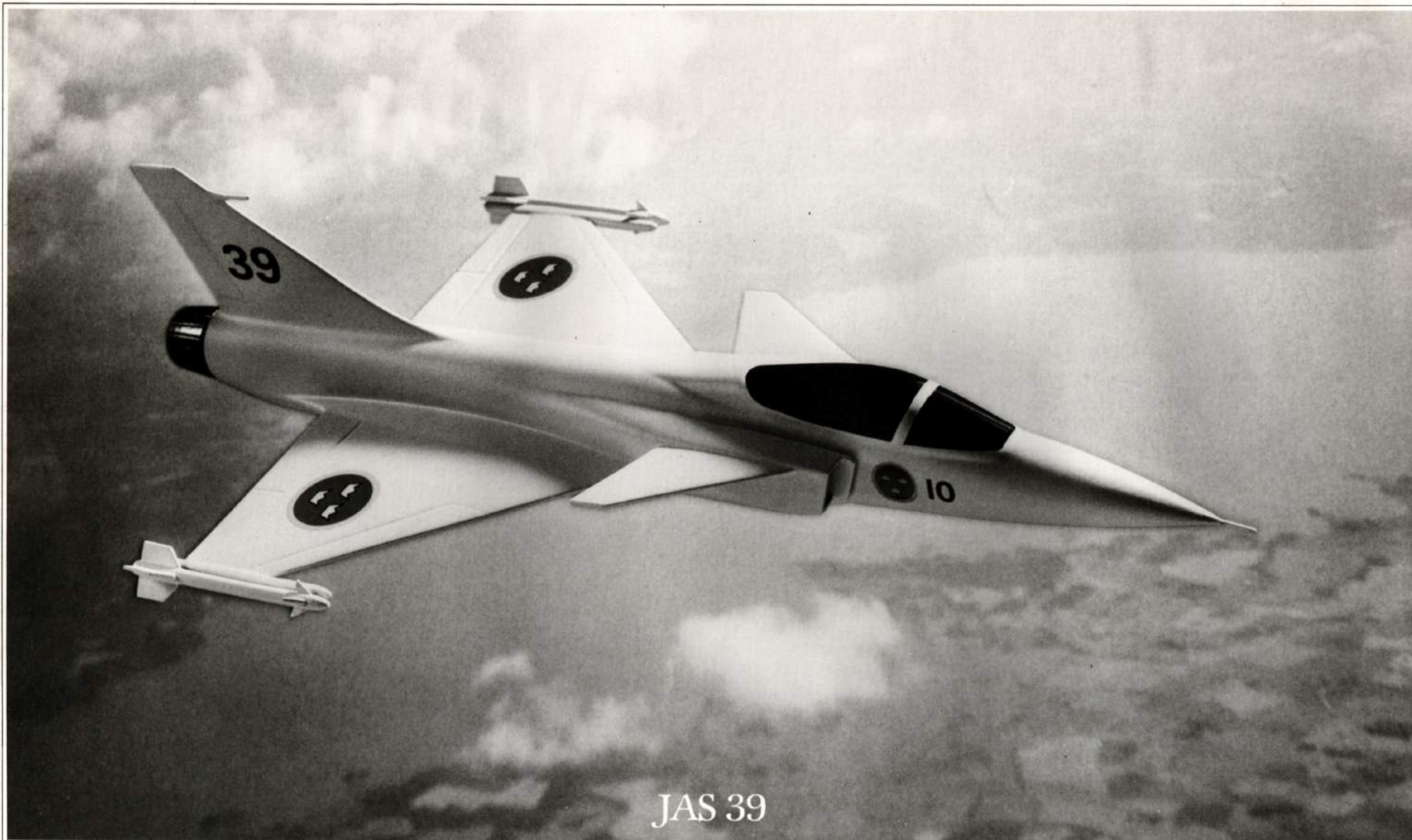
Saab 900 Turbo 16

The Saab 900 Turbo 16 added an entirely new dimension to the 900 line. The 900 Turbo 16's third-generation turbo engine with 16 valves and double overhead camshafts employs an advanced micro-processor-controlled Bosch LH-Jetronic fuel injection system and intercooler to turn out 175 bhp* and to reach speeds over 200 km/h*. The car's exceptional

acceleration and pulling power enables the driver to dominate traffic situation. The most recent version, the 900 Turbo 16S, is a sleek looking aerodynamically-designed high-performance vehicle. Equipped with side skirts, anti-roll bar, extended front spoiler and rear spoiler, the 900 Turbo 16S exceeds 210 km/h and is sure-footed even when cornering at high speeds.

(The Third Generation Turbo) In-line two-litre 16-valve engine with electronic LH-Jetronic fuel injection system, APC and intercooler. Rating: DIN 175 bhp at 5,300 rpm. Five-speed manual gearbox. Overall length: 4,740 mm. Width: 690 mm. Height: 1,420 mm. Maximum speed: 205 km/h (16 S – 210 km/h). Acceleration: 0–100 km/h, 8.7 s.

*without catalytic converter



JAS 39

The aircraft of the future, the multipurpose JAS 39 Gripen is the first in a new generation of light combat aircraft. It will be the first combat aircraft to make full use of the advanced technology currently available in engines, structural material, fly-by-wire control systems and microelectronics. As a result, this

compact aircraft will have the overall performance and capabilities of heavier and more expensive aircraft. The highly versatile JAS 39 is designed for interceptor, ground attack and reconnaissance roles all at the same time. The plane will be supersonic at all altitudes. The JAS 39 can take off from and land on roadstrips

substantially less than one kilometre long and less than ten metres wide. The plane will be available in the early 1990s.

Specifications are highly confidential.



Saab 9000 Turbo 16

Distinctive and dynamic, the Saab 9000 Turbo 16 represents a continuation of the Saab concept. Produced in the '80s, intended for the '90s, the 9000 is the realization of 40 years of plane-car design and technological know-how. The 9000 Turbo 16's combination of luxury and high performance gives it a unique position in the automotive world. It has Saab's third-generation turbocharged engine, superb roadholding and handling, stylish design, a large and

comfortable interior that seats five adults comfortably and has plenty of room for luggage. The 9000 Turbo 16, which has the looks of a luxury car and personality of a sports car, proves that it is possible to build a large car that combines performance, comfort and elegance without compromising economy and safety.

Transversely mounted two-litre 16-valve water-cooled engine with micro-processor-controlled LH-Jetronic fuel injection system, APC system and intercooler. Rating, DIN: 175 bhp at 5,300 rpm. Transversely-mounted five-speed fully synchromesh gearbox, integrated with the engine. McPherson struts, anti-roll bar, gas shock absorbers. Overall external length: 4,620 mm. Width: 1,764 mm. Height: 1,430 mm. Overall internal length: 1,890 mm. Legroom (front seats): 1,055 mm. (back seats) 985 mm. Unladen weight: 1,300–1,340 kg. Maximum speed: 220 km/h. Acceleration, 0–100 km/h, 8.3 s. Classified as a "Large Car" by American EPA standards.

The Common Denominator

The first Saab car was on the road shortly after the end of the Second World War.

Compared to the other cars of the period, it looked quite peculiar. In fact, it looked like a four-wheel airplane. That's because the engineers who designed and built the first Saab car, the 92, had a few decades experience designing and building military aircraft.

When the World War II ended, Saab (which is an acronym for Svenska Aeroplan AB) decided to expand its operations and entered the car industry. After several years in the competitive and technically dynamic aircraft industry, Saab engineers had no intention of copying another person's idea of a car. They were out to revolutionize the car. And they were going to do it by transferring the knowledge they developed in one technical field to another. The result was a car that anticipated many features that have become standard today.

Saab engineers looked at cars from an airplane's point of view. By applying aircraft physics to the design of a car, Saab engineers created a vehicle that could not be compared to the others on the market. The first Saab was lightweight and compact while the competition was large and heavy. Saab favoured front-wheel drive while virtually everyone else was designing rear-wheel drive. The Saab showed concern for structural strength and aerodynamics while practically nobody else paid attention to these.

Saab engineers were not bothered that their initial car was out of the ordinary. And they still are not bothered. Because Saab has an out-of-the ordinary way of looking at their products, which makes them stand out. Saab products are not thought-out through market research reports and economic calculations. All Saab products (be it cars or planes) originate from the same

principle of producing the most advanced technology to provide the user with the highest performance, best control and most enjoyment in a safe and comfortable machine that gets the most from its fuel.

This common trait of all Saab-Scania products grows out of the fact that ideas and information flow constantly among its divisions. Intimate cooperation is a key to transfer technical experience and innovation from product to product. The technological spill-over brings inherent benefits.

Much of the research and development for Saab aircraft have been incorporated into Saab passenger vehicles. As evidence of their aircraft influence, Saab cars have always been constructed with lighter and stronger materials and designed along aerodynamically-efficient lines. This contributes to high performance, good driving stability, safety and lower fuel consumption – traits that separate Saab cars from their competition.

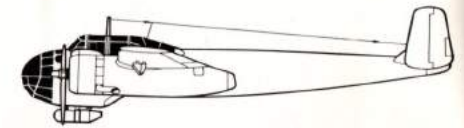
The Saab Turbo, which was one of the first turbo engines specifically designed for everyday driving, was first introduced in aircraft, then in trucks. Later it was redesigned by Saab engineers to give Saab passenger cars the same extra kick that the turbo gives to jets.

The ergonomics of Saab cars owes a lot to the research of how Saab aircraft pilots react at supersonic speeds. This knowledge has influenced the design of the vehicle's cockpit and dashboard to provide Saab drivers with the same man-machine interaction that is a trademark of Saab aircraft.

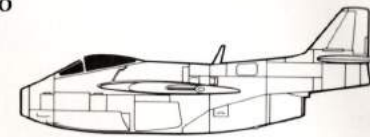
That's the way it is and will be. Because we at Saab have a unique way of designing and building highly technological products. Maybe that is why we are one of the world's leaders of advanced transportation technology.



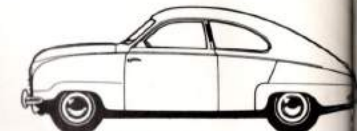
Saab 17 B, 1940



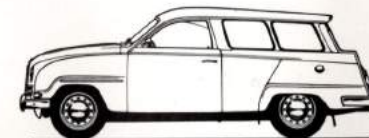
Saab 18 A, 1942



Saab 29 A, 1948



Saab 92, 1950



Saab 95, 1959



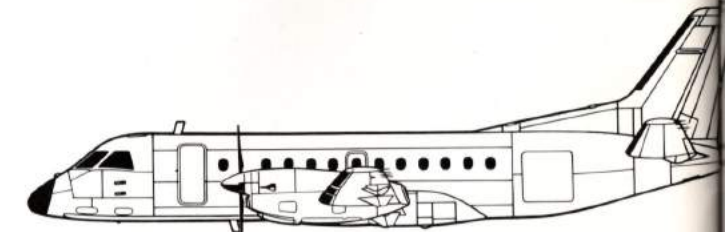
Saab 96 (850 GT)



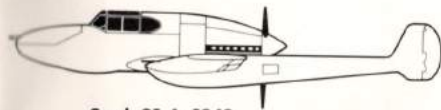
Saab 99, 1968



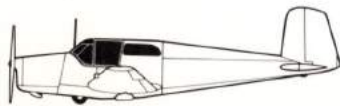
Saab MFI 15, 1969



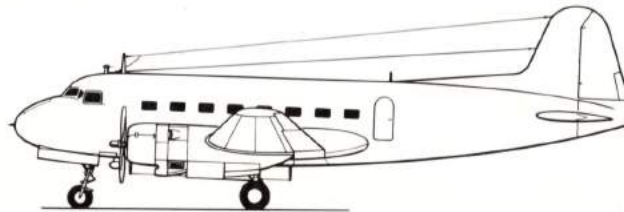
Saab-Fairchild 340, 1982



Saab 21 A, 1943



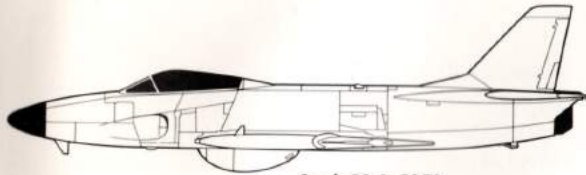
Saab 91 A, 1945



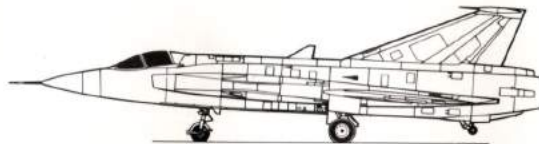
Saab 90 A-2, 1946



Saab 21 R, 1947



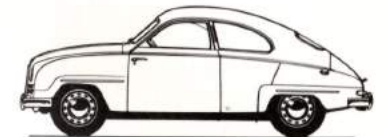
Saab 32 A, 1952



Saab 35 A, 1955



Saab Sonett I, 1956



Saab 93, 1956



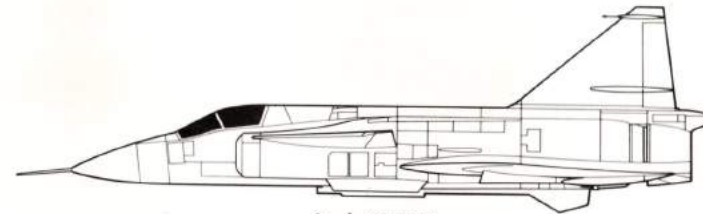
1960



Saab SK 60, 1963



Saab Sonett II, 1966



Saab 37, 1967



Saab Sonett III, 1970



Saab 99 L Combi Coupé, 1974



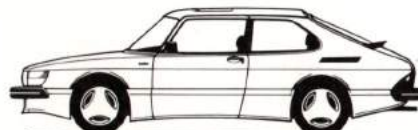
Saab 99 Turbo, 1978



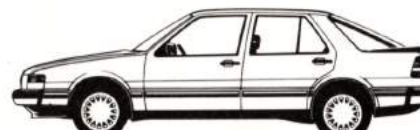
Saab 900 GLE, 1979



Saab 900 Turbo Sedan, 1980



Saab 900 Turbo 16 S, 1984



Saab 9000 Turbo 16, 1984

The Power Behind Saab

The Saab Car Division and Saab Aircraft Division are a part of Saab-Scania AB, a Swedish corporation that is one of the world's leaders in the fields of transportation and communication.

The company's diversification is unique. Within its automotive and aerospace sectors, Saab-Scania's product programme presently comprises passenger cars, trucks, buses, civil and military aircraft, satellites and missiles. In each of these fields, the company is a major source of technological leadership and innovation.

Outside the transport and communication sectors, Saab-Scania also supplies advanced products and systems in electronics, optics and precision mechanics as well as systems for energy recovery and heating.

THE ENGINEERING QUALITY

The tradition of quality in Saab-Scania engineering can be exemplified by the development of the internal combustion engine. From the early supercharged diesels to today's high-performance turbocharged passenger car engines, Saab-Scania has been recognized worldwide as a company that produces products of power coupled with economy.

The Saab Turbo, which is sweeping the car industry off its feet, came to be because of Scania's 30 years experience of turbocharging heavy truck engines

to provide the power and economy needed to get the job done.

But power alone is not enough. Response to human needs and to structural and safety problems must also be addressed. The person in command (pilot or driver) must be comfortable and within an arm's reach of all instruments. The concern for ergonomics, safety and comfort have always been hallmarks of Saab-Scania's product development.

WHERE DO WE GO FROM HERE

Saab-Scania's belief in the future is seen through its commitment to research and development.

Development costs for products in the Saab-Scania range are very high. It is vital that expenditures are kept as low as possible in both research and production. Cooperation with other international companies is a great advantage. Through the exchange of sharing research and testing, we come across new ideas and achieve the most from our research investments. The Saab-Faichild 340 is a prime example of successful cooperation.

It is our aim to continue compressing the dimensions of the world – on land, air and space. Saab-Scania is and intends to remain a leader of advanced transportation technology.

SAAB-SCANIA



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