







Volkswagen

Volkswagen Automobile Company



Type	Subsidiary of Volkswagen Group
Founded	1938
Headquarters	Wolfsburg, Germany
Area served	Worldwide
Key people	Martin Winterkorn: Chairman of the Board of Management, Christian Klingler: Board of Management of the Volkswagen Passenger Cars
Industry	Automotive industry
Products	mainstream Cars
Website	Volkswagen.com and VW.com

The **Volkswagen Automobile Company**, also known as **Volkswagen Passenger Cars** or just **VW**, is an automobile manufacturer based in Wolfsburg, Germany, and is the original brand within the Volkswagen Group, as well as the largest brand by sales volume. Volkswagen means "people's car" in German, in which it is pronounced [ˈfɔlks,va:gən]. Its current tagline or slogan is *Das Auto* (in English *The Car*). Its previous German tagline was *Aus Liebe zum Automobil*, which translates to: *Out of Love for the Car*, or, *For Love of the Automobile*, as translated by VW in other languages.

History

Adolf Hitler had a keen interest in cars even though he did not like to drive. In 1933, shortly after taking over as leader of Germany, he teamed up with Ferdinand Porsche to make changes to Porsche's original 1931 design to make it more suited for the working man, thus founding Volkswagen. (Béla Barényi is credited with having conceived the basic design five years earlier.) Hans Ledwinka discussed his ideas with Ferdinand Porsche, who used many Tatra design features in the 1938 "KdF-Wagen", later known as the VW Käfer—or Volkswagen Beetle. On 22 June 1934, Dr. Ferdinand Porsche agreed to create the "People's Car" for Hitler.

Changes included better fuel efficiency, reliability, ease-of-use, and economically efficient repairs and parts. The intention was that ordinary Europeans would buy the car by means of a savings scheme ("*Fünf Mark die Woche musst Du sparen, willst Du im eigenen Wagen fahren*" — "*Save five Marks a week, if you want to drive your own car*"), which around 336,000 people eventually paid into. Volkswagen honoured its savings agreements in West Germany (but not in East Germany) after World War II. Prototypes of the car called the "KdF-Wagen" (German: *Kraft durch Freude* — "strength through joy"), appeared from 1936 onwards (the first cars had been produced in Stuttgart). The car already had its distinctive round shape and air-cooled, flat-four, rear-mounted engine. The VW car was just one of many KdF programmes which included things such as tours and outings. The prefix "Volks" ("People's") was not just applied to cars, but also to other products in Europe; the "Volksempfänger" radio receiver for instance. On 28 May 1937, the *Gesellschaft zur Vorbereitung des Deutschen Volkswagens mbH* was established by the *Deutsche Arbeitsfront*. It was later renamed "Volkswagenwerk GmbH" on 16 September 1938.

Erwin Komenda, the longstanding Auto Union chief designer, developed the car body of the prototype, which was recognizably the Beetle we know today. It was one of the first to be evolved with the aid of a wind tunnel; unlike the Chrysler Airflow, it would be a success.

The building of the new factory started 26 May 1938 in the new town of KdF-Stadt, now called Wolfsburg, which had been purposely built for the factory workers. This factory only produced a handful of cars by the time war started in 1939. None were actually delivered to any holder of the completed saving stamp books, though one Type 1 Cabriolet was presented to Hitler on 20 April 1938 (his 49th birthday).

War meant production changed to military vehicles, the Type 82 *Kübelwagen* ("Bucket car") utility vehicle (VW's most common wartime model), and the amphibious *Schwimmwagen* which were used to equip the German forces.



1945: British Army, Major Ivan Hirst, unclear future

The company owes its post-war existence largely to one man, British Army officer Major Ivan Hirst, REME. In April 1945, KdF-Stadt, and its heavily bombed factory were captured by the Americans, and subsequently handed over to the British, within whose occupation zone the town and factory fell. The factory was placed under the control of Oldham-born Hirst. At first, the plan was to use it for military vehicle maintenance. Since it had been used for military production, and had been in Hirst's words a "political animal" rather than a commercial enterprise, the equipment was in time intended to be salvaged as war reparations. Hirst painted one of the factory's cars green and demonstrated it to British Army headquarters. Short of light transport, in September 1945 the British Army was persuaded to place a vital order for 20,000. The first few hundred cars went to personnel from the occupying forces, and to the German Post Office.

Some UK Service personnel were allowed to take their VW Beetles' back to the UK when they were demobilized, and one of the very first Beetles brought back in that way (UK registration number JLT 420) is still owned by Peter Colborne-Baber, the son of the original proprietor of the UK's first official Volkswagen Importer, Colborne Garages of Ripley, Surrey. By 1946 the factory was producing 1,000 cars a month, a remarkable feat considering it was still in disrepair. Due to roof and window damage, rain stopped production and steel to make the cars had to be bartered for new vehicles. The car, and its town changed their Second World War-era names to "Volkswagen", and "Wolfsburg" respectively, and production was increasing. It was still unclear what was to become of the factory. It was offered to representatives from the British, American and French motor industries. Famously, all rejected it. After an inspection of the plant, Sir William Rootes, head of the British Rootes Group, told Hirst the project would fail within two years, and that the car "is quite unattractive to the average motorcar buyer, is too ugly and too noisy ... If you think you're going to build cars in this place, you're a bloody fool, young man". In an ironic twist of fate, Volkswagen would manufacture a locally built version of Rootes' Hillman Avenger in Argentina in the 1980s, long after Rootes went bust at the hands of Chrysler in 1978—the Beetle outliving the Avenger by over 30 years. Ford representatives were equally critical: the car was "not worth a damn" Henry Ford II, the son of Edsel Ford, did reportedly look at the possibility of taking over the VW factory, but dismissed the idea as soon as he looked up Wolfsburg on the map and found it to be too close for comfort to the East German border. In France, Citroën started the 2CV on a similar marketing concept. Meanwhile, in Italy, the Fiat 500 "Topolino" was developed.

Survival in Allied occupied Germany

In Occupied Germany, the Allies followed the Morgenthau Plan, to remove all German war potential, by complete or partial pastoralisation. As part of this, in the Industrial plans for Germany, the rules for which industry Germany was to be allowed to retain were set out. German car production was set at a maximum of 10% of the 1936 car production numbers. The Volkswagen factory at Wolfsburg came under UK control in 1945, it was to be dismantled and shipped to Britain. Thankfully for Volkswagen, no British car manufacturer was interested in the factory; "the vehicle does not meet the fundamental technical requirement of a motor-car ... it is quite unattractive to the average buyer ... To build the car commercially would be a completely uneconomic enterprise". The factory survived by producing cars for the British Army instead. Allied dismantling policy changed in late 1946 to mid 1947, although heavy industry continued to be dismantled until 1951. In March 1947 Herbert Hoover helped change policy by stating: "There is the illusion that the New Germany left after the annexations can be reduced to a 'pastoral state'. It cannot be done unless we exterminate or move 25,000,000 people out of it". Thanks to the protection of British Army Major Ivan Hirst, Volkswagen survived the perilous times, and became part of the German economic recovery.

1948–1974: icon for the West German regeneration

From 1948, Volkswagen became a very important element, symbolically and economically, of West German regeneration. Heinrich Nordhoff (1899–1968), a former senior manager at Opel who had overseen civilian and military vehicle production in the 1930s and 1940s, was recruited to run the factory in 1948. In

1949 Major Hirst left association with the company, as it was now re-formed as a trust, controlled by the West German government, and the government of the State of Lower Saxony. Apart from the introduction of the Volkswagen Type 2 commercial vehicle (van, pickup and camper), and the VW Karmann Ghia sports car, Nordhoff pursued the one-model policy until shortly before his death in 1968.

Volkswagens were first exhibited and sold in the United States in 1949, but only sold two units in America that first year. On its entry to the U.S. market, the VW was briefly sold as a "Victory Wagon". Volkswagen of America was formed in April 1955 to standardize sales and service in the United States. Production of the Type 1 Volkswagen Beetle increased dramatically over the years, the total reaching one million in 1955.

Sales soared — due in part to the famous advertising campaigns by New York advertising agency Doyle, Dane Bernbach. Led by art director Helmut Krone, and copywriters Julian Koenig and Bob Levinson, Volkswagen ads became as popular as the car, using crisp layouts and witty copy to lure the younger, sophisticated consumers with whom the car became associated. Despite the fact it was almost universally known as the Beetle (or the Bug), it was never officially labeled as such by the manufacturer, instead referred to as the Type 1. The first reference to the name Beetle occurred in U.S. advertising in 1968, but not until 1998 and the Golf-based New Beetle would the name be adopted by Volkswagen.

Although the car was becoming outdated, during the 1960s and early 1970s, American exports, innovative advertising, and a growing reputation for reliability helped production figures surpass the levels of the previous record holder, the Ford Model T. On February 17, 1972 the 15,007,034th Beetle was sold. Volkswagen could now claim the world production record for the most-produced, single make of car in history. By 1973, total production was over 16 million.

To commemorate its passing the Ford Model T's record sales mark and its victories in the Baja 1000 Mexican races from 1967-1971, Volkswagen produced its first limited-edition Beetle. It was marketed as the "Baja Champion SE" in the United States and the "Marathon" Superbeetle in the rest of the world. It featured unique "Marathon Blau" metallic blue paint, steel-pressed 10-spoke 15-inch mag wheels, a commemorative metal plate mounted on the glovebox and a certificate of authenticity presented to the original purchaser. Dealer-installed options for this limited-edition Superbeetle included the following: white stripes running the length of the rocker-panel, a special shifter knob, bumper overrides, tapered exhaust tips, fake walnut inserts in the dash (behind the steering wheel and the glovebox cover) as well as Bosch fog lights mounted to the front bumper.

VW expanded its product line in 1961 with the introduction of several Type 3 models, which were essentially body style variations (Fastback, Notchback, Squareback) based on Type 1 mechanical underpinnings, and again in 1969 with the larger Type 4 (also known as the 411 and 412) models. These differed substantially from previous vehicles, with the notable introduction of monocoque/unibody construction, the option of a fully automatic transmission, electronic fuel injection, and a sturdier powerplant. Volkswagen added a "Super Beetle"^[8] (the Type 113) to its lineup in 1971. The Type 113 differed from the standard Beetle in its use of a MacPherson strut front suspension instead of the usual torsion bars. Also the nose of the car was stretched 2 inches (51 mm) to allow the spare tyre to lie flat, and the combination of these two features significantly increased the usable front luggage space. Despite the Super Beetle's (marketed outside North America as the VW 1302, later 1303) popularity with Volkswagen customers, purists preferred the standard Beetle with its less pronounced nose and its original torsion bar suspension. In 1973, Volkswagen introduced the military-themed Type 181, or "Trekker" in Europe and the UK, "Thing" in America, recalling the wartime Type 81. The military version was produced for the NATO-era German Army during the Cold War years of 1970 to 1979. The US Thing version only sold for two years, 1973 and 1974, due at least in part to Ralph Nader's automobile safety campaigns.

In 1964, Volkswagen succeeded in purchasing Auto Union, and in 1969, NSU Motorenwerke AG (NSU). The former company owned the historic Audi brand, which had disappeared after WW2. VW ultimately merged Auto Union and NSU to create the modern day Audi company, and would go on to develop it as its

luxury vehicle marque. However, the purchase of Auto Union and NSU proved to be a pivotal point in Volkswagen's history, as both companies yielded the technological expertise that proved necessary for VW to survive when demand for its air-cooled models went into terminal decline as the 1970s dawned.

1974: from Beetle to Golf/Rabbit

Volkswagen was in serious trouble by 1973. The Type 3 and Type 4 models had sold in much smaller numbers than the Beetle and the NSU-based K70 also failed to woo buyers. Beetle sales had started to decline rapidly in European and North American markets. The company knew that Beetle production had to end one day, but the conundrum of replacing it had been a never-ending nightmare. VW's ownership of Audi / Auto Union proved to be the key to the problem - with its expertise in front-wheel drive, and water-cooled engines which Volkswagen so desperately needed to produce a credible Beetle successor. Audi influences paved the way for this new generation of Volkswagens, known as the Polo, Golf and Passat.

The Volkswagen Polo was in fact simply a re-badging of the short-lived Audi 50, which had been hastily developed from a sedan design, the Audi 60. However, VW produced it shortly after the introduction of the Polo as the Volkswagen Derby. In the rear of the car can plainly be seen that panels are added to the Polo structure to make a "three-box" design of saloon (sedan), or saloon with a boot or trunk.

The Volkswagen Passat (Dasher in the U.S.), introduced in 1973, was again simply a fastback (available as either a hatchback or with separate boot) version of the Audi 80, using identical body and mechanical parts, and the Audi 80 was later produced on the same line in Wolfsburg as the Passat. Estate/wagon versions were offered for overseas markets, however, for two years, if British and South African customers wanted an estate/wagon version, they had to go considerably up-market and buy the Audi 80 GL estate.

However, the pivotal model which would turn Volkswagen's fortunes emerged as the Volkswagen Golf in 1974 (marketed in the United States and Canada as the Rabbit until 1985 and as the Golf until 2006, when the Rabbit name was re-introduced). This was a car unlike its predecessor in most significant ways, both mechanically as well as visually (its angular styling was designed by the Italian Giorgetto Giugiaro). Its design followed trends for small family cars set by the 1959 Mini — the Golf had a transversely mounted, water-cooled engine in the front, driving the front wheels, and had a hatchback, a format that has dominated the market segment ever since. Beetle production at Wolfsburg ended upon the Golf's introduction, but continued in smaller numbers at other German factories (Hanover and Emden) until 1978, but mainstream production shifted to Brazil and Mexico.

Volkswagen from 1974 to 1990

While Volkswagen's range of cars soon became similar to that of other large European automakers, the Golf has been the mainstay of the Volkswagen lineup since its introduction, and the mechanical basis for several other cars of the company. There have been six generations of the Volkswagen Golf, the first of which was produced from the summer of 1974 until the end of 1983 (sold as the Rabbit in the United States and Canada and as the Caribe in Latin America). Its chassis also spawned the Volkswagen Scirocco sport coupe, Volkswagen Jetta saloon/sedan, Volkswagen Golf Cabriolet convertible, and Volkswagen Caddy pickup. North American production of the Rabbit commenced at a factory in New Stanton, Pennsylvania in 1978. It would be produced in the United States as the Rabbit until the spring of 1984. The second-generation Golf hatchback/Jetta sedan ran from late 1983 to late 1991, and a North American version produced in Pennsylvania went on sale at the start of the 1985 model year. The production numbers of the first-generation Golf has continued to grow annually in South Africa as the Citi Golf, with only minor modifications to the interior, engine and chassis, using tooling relocated from the New Stanton, Pennsylvania plant when that site began to build the Second Generation car.

In the 1980s, Volkswagen's sales in the United States and Canada fell dramatically, despite the success of models like the Golf elsewhere. The Japanese and the Americans were able to compete with similar products at lower prices. Sales in the United States were 293,595 in 1980, but by 1984 they were down to 177,709. The introduction of the second-generation Golf, GTI and Jetta models helped Volkswagen briefly in North America. Motor Trend named the GTI its Car of the Year for 1985, and Volkswagen rose in the J.D. Power buyer satisfaction ratings to eighth place in 1985, up from 22nd a year earlier. VW's American sales broke 200,000 in 1985 and 1986 before resuming the downward trend from earlier in the decade. Chairman Carl Hahn decided to expand the company elsewhere, and the New Stanton, Pennsylvania factory closed on 14 July 1988. Meanwhile, Hahn expanded the company by purchasing a greater share of the Spanish car maker SEAT, which VW bought outright in 1990; the Czech car maker Škoda Auto was acquired the following year.

Volkswagen had entered the supermini market in 1976 with the Volkswagen Polo, a stylish and spacious three-door hatchback designed by Bertone. It was a strong seller in West Germany and most of the rest of Western Europe, being one of the first foreign small cars to prove popular in Britain. The second generation model, launched in 1981 and sold as a hatchback and "coupe" (with the hatchback resembling a small estate car and the coupe being similar to a conventional hatchback), was an even greater success for Volkswagen. It was facelifted in 1990 and was still selling well after 13 years, when it was replaced by the third generation Polo in 1994.

Volkswagen from 1991 to 2000

In 1991, Volkswagen launched the third-generation Golf, which was European Car of the Year for 1992 (the previous two generations were nominated but lost to the Citroën CX in 1975 and the Fiat Uno in 1984). The Golf Mk3 and Jetta arrived in North America just before the start of 1994 model year, first appearing in southern California in the late spring of 1993. The sedan version of the Golf was badged Vento in Europe (but remained Jetta in the USA, where its popularity eventually outstripped the Golf).

The late 1990s saw a gradual change in perception of the company's products - with Audi having elevated itself into same league as BMW and Mercedes-Benz, Volkswagen moved upmarket to fill the void left by Audi; with SEAT and Škoda now occupying what was once VW's core market. The first tangible evidence of this was the fifth-generation Passat in 1996 with its high-quality interior trim and standards of build quality which were demonstrably a cut above the run-of-the-mill Ford Mondeo, Opel/Vauxhall/ Holden/Chevrolet Vectra and Peugeot 406.

This move upmarket was continued with the Golf Mk4, introduced at the end of 1997 (and in North America in 1999), its chassis spawned a host of other cars within the Volkswagen group — the Volkswagen Bora (the sedan, still called Jetta in the USA), New Beetle, SEAT Toledo, SEAT León, Audi A3, Audi TT and Škoda Octavia. However, it was beaten into third place for the 1998 European Car of the Year award by the winning Alfa Romeo 156 and runner-up Audi A6.

The other main models have been the Polo, a smaller car than the Golf, and the larger Passat for the segment above the Golf. The Scirocco and the later Corrado were both Golf-based coupés.

By the early 1990s, Volkswagen's annual sales in the United States were below 100,000, and many car buyers found the company's products to be lacking in value. Some automotive journalists believed that Volkswagen would have to quit the North American market altogether. VW eventually realized that the Beetle was the heart and soul of the brand in North America, and the firm quickly set about creating a new Beetle for American and Canadian showrooms.

The Volkswagen New Beetle proved to be a popular concept, especially in North America. In 1994, Volkswagen unveiled the J Mays-designed Concept One, a "retro"-themed car with a resemblance to the original Beetle but based on the Polo platform. Its genesis was secret and in opposition to VW management, who

felt it was too backward-looking. Management could not deny the positive public response to the concept car and gave the green-light to its development as the New Beetle. The production car would be based on the Golf rather than the Polo, because the Polo frame was too small for the car to pass crash test standards in the U.S. It has been quite popular in the North America and is now gaining in the EU.

Volkswagen's fortunes in North America improved once the third-generation Golf and Jetta models became available there. Sharp advertising and savvy promotional stunts, like including Trek bicycles, and accompanying bike racks with a limited edition of the 1996 Jetta sedan, were credited for the firm's recovery in the U.S. and Canada, but the introductions of the New Beetle and the fifth-generation Passat were a major boost to the brand.

In the UK, Volkswagen's market share grew throughout the 1990s. In 1990, the Golf was Britain's 12th most popular car with nearly 50,000 units sold. The Mk3 Polo achieved similar success in the mid 1990s, but in 1999 the Mk4 Golf was Volkswagen's first-ever entrant in Britain's top 10 list of most popular new cars. Its success continued into the 2000s, while the Polo and Passat were never far outside the top 10. Bad news for Volkswagen during this era was a dip in customer satisfaction. A brand which had built its reputation on reliability was now being overtaken by marques whose reputations had been damaged by quality problems. This bad press took several years to eradicate.

Volkswagen in the 21st century

Volkswagen began introducing an array of new models after Bernd Pischetsrieder became Volkswagen Group CEO (responsible for all Group brands) in 2002. The fifth generation VW Golf was launched in 2004, came runner-up to the Fiat Panda in the 2004 European Car of the Year, and has spawned several cousins: SEAT Toledo, Škoda Octavia and Audi A3 hatchback ranges, as well as a new mini-MPV, the SEAT Altea. The GTI, a "hot hatchback" performance version of the Golf, boasts a 2.0 L Turbocharged FSI direct injection engine. VW began marketing the Golf under the Rabbit name once again in the U.S. and Canada in June 2006. (The GTI had arrived to North America four months earlier). The fifth-generation Jetta, and the performance version, the GLI, are also available in the United States and Canada. The sixth-generation Passat and the fifth-generation Jetta both debuted in 2005, and VW has announced plans to expand its lineup further by bringing back the Scirocco by 2008. Other models in Wolfgang Bernhard's (Volkswagen brand CEO) "product offensive" include the Tiguan mid-sized SUV in 2008 and a Passat Coupé. In November 2006 Bernd Pischetsrieder announced his resignation as Volkswagen Group CEO, and was replaced by Audi worldwide CEO Martin Winterkorn at the beginning of 2007. Winterkorn is credited with making Audi a challenger to the dominance of BMW and Mercedes, and his design-led strategy has led to Audi being considered one of the most important brands in the world. It remains to be seen how Winterkorn's focus on design shapes the Volkswagen brand's future. Nevertheless, Volkswagen continues to have complicated relations with both unions and shareholders. The German state of Lower Saxony owns significant stock in VW, as does sportscar manufacturer Porsche. Recently Porsche has announced to buy the majority of Volkswagen's stock, thus becoming the new owner of Volkswagen.

In North America, VW faced many challenges. After rising significantly between 1998 and 2001, VW's North American sales began to fall sharply leading to a 2005 loss of roughly US\$1 billion for its operations in the U.S. and Canada. Profitability has not been strong, and the lack of reliability of the company's cars appears to bear some of the responsibility for this situation. By 2005, its models sat near the bottom of *Consumer Reports* reliability ratings, and J.D. Power and Associates ranked VW 35th out of 37 brands in its initial quality survey. Attempts to enter a new market segment also compromised Volkswagen's standing in North America. In 2002, Volkswagen announced the debut of its Phaeton luxury car, which was critically acclaimed but not well received in the marketplace. VW announced its discontinuance in the U.S. market for the 2007 model year due to the disappointing sales.

Volkswagen in 2005, despite challenges, still maintained North American sales of 224,195—a dramatic increase from the low in 1993 when US sales totaled only 49,533 vehicles. Momentum continued for fiscal 2006, as VW's North American sales for the year were 235,140 vehicles, a 4.9 percent increase over 2005, despite a slump in domestic North American manufacturer's sales. VW plans to close out the decade with the release on several new vehicles worldwide and a barrage of advertising. In conjunction with the introduction of new models, production location of Volkswagen vehicles also underwent great change. The 2007 Eos, a hardtop convertible, is produced in a new facility in Portugal. All Golf/Rabbit and GTIs as of 2006 are manufactured in Wolfsburg, Germany, rather than VW's Mexican factory in Puebla, where Golfs and GTIs for the North American market were produced from 1989 to 1998, and the Brazilian factory in Curitiba, where Golfs and GTIs were produced from 1999 to 2006. (The Jetta has primarily been made in Mexico since 1989). VW is also in the process of reconfiguring an automotive assembly plant in Belgium. The new models and investments in manufacturing improvements were noticed immediately by automotive critics. Favorable reviews for VW's newest cars include the GTI being named by *Consumer Reports* as the top sporty car under \$25,000, one of Car and Driver magazines "10 Best" for 2007, Automobile Magazine's 2007 Car of the Year, as well as a 2008 Motor Trend comparison ranking the midsize Passat first in its class. J.D. Power and Associates 2006 Automotive Performance, Execution and Layout (APEAL) Study scored Volkswagen fourteenth overall with strong performances by its new Jetta and Passat models. Volkswagen is recognized as one of the leading small diesel engine manufacturers, and is partnering with Mercedes and other companies to market BlueTec clean diesel technology, calling it BlueMotion. Volkswagen has offered a number of its vehicles with a TDI Turbocharged Direct Injection engine, which lends class-leading fuel economy to several models. According to the United States Environmental Protection Agency, four of the ten most fuel efficient vehicles available for sale in the U.S. in 2004 were powered by Volkswagen diesel engines. They were a three-way tie for 8th (TDI Beetle, TDI Golf, TDI Jetta) and ninth, the TDI Jetta Wagon. As of 2007, VW has not yet offered a petrol-electric hybrid powertrain such as that in the Toyota Prius (though a diesel-electric hybrid 5th generation Jetta was produced as a test vehicle). In addition, all Volkswagen TDI diesel engines produced from 1996 to 2003-2006 can be driven on 100% biodiesel fuel. For the 2007 model year, however, strict U.S.



government emissions regulations have forced VW to drop most diesels from their U.S. engine lineup, but a new lineup of diesel engines compatible to U.S. standards are due for 2008.

Volkswagen long resisted adding a utility vehicle to its lineup, but it finally relented with the introduction of the Touareg in the early 2000s, sharing major components with the Porsche Cayenne and Audi Q7 sport utility vehicles. Though acclaimed as a fine handling vehicle, the Touareg has been a modest seller at best. Some automotive analysts blame the Touareg's absence of a third-row seat, the relatively poor fuel economy, and the high vehicle mass. VW plans to add a compact SUV with styling influences from its "Concept A" concept vehicle. On July 20, 2006, VW announced that the new vehicle would be called the Tiguan. One major irony of Volkswagen's current North American lineup is the absence of a minivan, considering that VW is credited for inventing the minivan with its original Transporter, but the firm is currently developing just such a vehicle for the U.S. and Canadian markets with DaimlerChrysler named the Volkswagen Routan, with current plans to introduce it in 2008. Volkswagen is also considering a new entry-level model for the North American lineup. A venture with DaimlerChrysler to produce such a vehicle was considered but dropped as of September 2006. Due to technical difficulty adapting the Polo to meet North American vehicle regulations, VW presented in 2006 the "Iroc" as a concept of the proposed 2009 Scirocco as a potential new small model.

In September 2006, Volkswagen began offering the City Golf and City Jetta only for the Canadian market. Both models were originally the Mk4 Golf and Jetta but were later replaced with the Brazilian versions of the Golf Mk4 and Bora. The City Golf and City Jetta were introduced to compete with the Toyota Yaris and Honda Fit. Volkswagen's introduction of such models is seen as a test of the market for a subcompact and, if successful, may be the beginnings of a thriving subcompact market for Volkswagen.

When Martin Winterkorn became the eighth postwar CEO of Volkswagen, the company made several personnel changes in Wolfsburg. Though the VW Group already had their presence in India with Škoda Auto, Volkswagen introduced the Passat and Touareg with TDI engine to India's automobile market in September 2007.

The VW 1L will be available in 2010, in limited numbers. The 1L is a lightweight two person vehicle made out of a magnesium frame covered by an unpainted carbon fiber skin. Every component of the vehicle is intended to reduce the vehicles weight. Aluminum brakes, carbon fiber wheels, titanium hubs, and ceramic bearings all contribute to the vehicle's light weight of a mere 290 kg. To reduce the weight even further, and to increase the aerodynamics of the vehicle, there are no rear view mirrors. Instead, the car is equipped with cameras that display visual information to the driver via the internal LCD screen. The car is extremely fuel efficient, each gallon of fuel will take you over 235 miles. The fuel tank holds just 1.7 gallons, making the entire travel distance capability about 400 miles per tank. Its top speed is 120 km/h (75 mph), which although isn't too fast is a welcome trade off for the huge savings in gas consumption.

On July 15, 2008 Volkswagen announced that they will construct an automobile assembly plant in Chattanooga, Tennessee. This plant will produce cars specifically designed for North America beginning with the New Midsize Sedan, which will be more competitive with North American market leaders Toyota Camry and Honda Accord. Production is scheduled to begin in early 2011 and is expected to end more than five years of losses in the world's largest auto market.

Relationship with Porsche, and the "*Volkswagen Law*"

Volkswagen has always had a close relationship with Porsche, the Zuffenhausen-based sports car manufacturer founded in 1931 by Ferdinand Porsche, the original Volkswagen designer. The first Porsche car, the Porsche 64 of 1938, used many components from the Volkswagen Beetle. The 1948 Porsche 356 continued using many Volkswagen components, including a tuned engine, gearbox and suspension.

The two companies continued their collaboration in 1969 to make the VW-Porsche 914 and 914-6, whereby the 914-6 had a 6-cylinder Porsche engine, and the standard 914 had a 4-cylinder Volkswagen engine, and in 1976 with the Porsche 912E (USA only), and the Porsche 924, which used many Audi components and was built at an Audi Neckarsulm factory. Most 944s also were built there, although they used far fewer VW components.

The Porsche Cayenne, introduced in 2002, shares its entire chassis with VW Touareg and Audi Q7, which are built at the Volkswagen factory in Bratislava.

In September 2005, Porsche announced it would increase its 5% stake in Volkswagen to 20% at a cost of €3 billion, with the intention that the combined stakes of Porsche and the government of Lower Saxony would ensure that any hostile takeover by foreign investors would be impossible. Speculated suitors included DaimlerChrysler, BMW, and Renault. In July 2006, Porsche increased their ownership again to 25.1%.

On February 13, 2007 Advocate General Damaso Ruiz-Jarabo ruled that a German law preventing any shareholder in Volkswagen from executing more than 20% of the total voting rights in the firm was illegally restricting the flow of capital in Europe. This again opened the possibility of a hostile takeover of VW and so on 26 March of the same year Porsche took its holding of Volkswagen shares to 30.9%. Porsche formally announced in a press statement that it did not intend to take over Volkswagen, but intended the move to avoid a competitor taking a large stake and to stop hedge funds from dismantling VW. As expected, on October 22, 2007 the European Court of Justice ruled in agreement with Ruiz-Jarabo and the law was struck down.

On October 26, 2008, Porsche finally revealed its plan to assume control of VW. As of that day, it held 42.6 percent of Volkswagen's ordinary shares and stock options on another 31.5 percent. Combined with the state of Lower Saxony's 20.1% stake, this left only 5.8% of shares on the market most of which were held by index funds who could not legally sell. Hedge funds desperate to cover their short positions forced Volkswagen stock above one thousand euros per share, briefly making it the world's largest company by market capitalization on October 28, 2008. On 6th of May 2009 the two companies decided to join together, in a merger.



Electric and alternative fuel vehicles

Clean diesel

Volkswagen has been selling clean diesel-powered engines for the European market since 2003. VW developed Turbocharged Direct Injection (TDI) technology for diesel engines, and it offers a wide array of TDI powertrains. As modern diesel fuel economy is 30 percent higher than gasoline engines, a proportional reduction of greenhouse gases emissions is achieved with clean diesel technology. Volkswagen is also developing hybrid technology for diesel-electric. A VW Golf turbo-diesel hybrid concept car was exhibited in the 2008 Geneva Motor Show, which has a fuel economy of 70 mpg (3.3 liters per 100 km).

Volkswagen of America Inc. promotes its work in developing "clean diesel", and other fuel-efficient technologies, in order to increase U.S. sales to environmentally conscious consumers. One of the promoting vehicle is the 2009 clean-diesel Jetta TDI, which has a 16-valve, four-cylinder common rail direct injection engine which reduces emissions by 90 percent. Volkswagen also claims that this model has the advantage of fuel economy in the mid-50s and mid-40s in city conditions. Stefan Jacoby, CEO of America's Volkswagen, said that it will be released in a sedan and sport-wagon model in May 2008 in California, becoming the first 50-state clean diesel offering.

Electric vehicles

Volkswagen and Sanyo have teamed up to develop a hybrid vehicle battery system.

Volkswagen boss Martin Winterkorn has confirmed the company plans to build compact hybrid vehicles. There will definitely be compact hybrid models, such as Polo and Golf, and without any great delay", with gasoline and diesel engines. For example, Golf is the ideal model to go hybrid as the Golf 1.4 TSI was recently awarded the "Auto Environment Certificate" by the Oko-Trend Institute for Environmental Research, and was considered as one of the most environmentally friendly vehicles of 2007. Also underway at Volkswagen's Braunschweig R&D facilities in Northern Germany is a hybrid version of the next-generation Touareg, due in 2010.

VW intends all future models to have the hybrid option. "Future VW models will fundamentally also be constructed with hybrid concepts," VW head of development Ulrich Hackenberg told *Automobilwoche* in an interview. Hackenberg mentioned that the car based on the up! concept seen at Frankfurt motorshow, as well as all future models, could be offered with either full or partial hybrid options. The rear-engine up! Will go into production in 2011. Nothing has been said about plug-in hybrid option.

Neat ethanol vehicles

Volkswagen do Brasil produced and sold neat ethanol vehicles (E100 only) in Brazil, and production was discontinued only after they were substituted by the more modern technology of flexible-fuel vehicles. As a response to the 1973 oil crisis, the Brazilian government began promoting bioethanol as a fuel, and the National Alcohol Program *-Pró-Álcool-* (Portuguese: *Programa Nacional do Álcool*) was launched in 1975. Compelled by the second oil crisis, and after development and testing with government fleets by the Brazilian General Command for Aerospace Technology (CTA) (CTA) at São José dos Campos, and

further testing of several prototypes developed by the four local carmakers, including Volkswagen do Brasil, neat ethanol vehicles were launched in the Brazilian market beginning in that year. Gasoline engines were modified to support hydrous ethanol characteristics and changes included compression ratio, amount of fuel injected, replacement of materials that would get corroded by the contact with ethanol, use of colder spark plugs suitable for dissipating heat due to higher flame temperatures, and an auxiliary cold-start system that injects gasoline from a small tank in the engine compartment to help starting when cold. Six years later around three quarters of Brazilian passenger cars were manufactured with ethanol engines.

Production and sales of neat ethanol vehicles tumbled beginning in 1987 due to several factors, including a sharp decline in gasoline prices as a result of the 1980s oil glut, and high sugar prices in the world market, shifting sugarcane ethanol production from fuel to sugar. By mid 1989 a shortage of ethanol fuel supply in the local market left thousands of vehicles in line at gas stations or out of fuel in their garages, forcing consumers to abandon ethanol vehicles.

Flexible-fuel vehicles

In March 2003, on its fiftieth anniversary, Volkswagen do Brasil launched in the local market the Gol 1.6 Total Flex, the first Brazilian commercial flexible fuel vehicle capable of running on any mix of E20-E25 gasoline and up to 100% hydrous ethanol fuel (E100). After the neat ethanol fiasco, consumer confidence on ethanol-powered vehicles was restored, allowing a rapid adoption of the flex technology, which was facilitated by the fuel distribution infrastructure already in place throughout Brazil, with more than 30 thousand fueling stations, a heritage of the *Pró-Álcool* program,

Due to the success and rapid consumer acceptance of the flex versions, by 2005 VW sold 293,523 flex cars and light-duty trucks, and only 53,074 gasoline-powered automobiles, jumping to 525,838 flex-fuel vehicles while selling only 13,572 cars and 248 light trucks powered by gasoline in 2007, and reaching new car sales of 564,959 flex fuels in 2008, representing 96 percent of all cars and light duty trucks sold in that year. VW do Brasil has stopped manufacturing gasoline-only vehicles models for the local market since 2006, and remaining gasoline-engine sales comes from imports. The flex fuel models produced for the local market are Gol, Fox, CrossFox, Parati, Polo Hatch, Polo Sedan, Saveiro, Golf, and Kombi. By March 2009 Volkswagen do Brasil attained the milestone mark of two million flexible-fuel vehicles produced since 2003.

















































KDF Logo
c. 1939



Before WWII



After WWII,
changed by the British



3D Look by
MetaDesign (2000)