







Ford Motor Company

Ford Motor Company



Type	Public (NYSE: F)
Founded	June 16, 1903
Founder(s)	Henry Ford
Headquarters	Dearborn, Michigan, United States
Area served	Worldwide
Key people	William C. Ford, Jr. (Executive Chairman) Alan R. Mulally (President) & (CEO)
Industry	Automotive
Products	Mainstream/Performance vehicles Automotive parts
Services	Automotive finance, Vehicle leasing, Vehicle service
Revenue	▼ US\$146.277 billion (2008)
Operating income	▼ US\$(-9.293) billion (2008)
Net income	▼ US\$(-14.672) billion (2008)
Total assets	▼ US\$222.977 billion (2008)

Total equity	▼ US\$(-17.311) billion (2008)
Employees	87,700 (US, 2008) 213,000 (World, 2008)
Divisions	Ford Credit Ford division Lincoln Mercury Premier Automotive Group
Subsidiaries	Automotive Components Holdings Mazda (13% minority) Volvo (cars only)
Website	Ford.com

The **Ford Motor Company** (NYSE: F) is an American multinational corporation and the world's fourth largest automaker based on worldwide vehicle sales, following Toyota, General Motors, and Volkswagen. Based in Dearborn, Michigan, a suburb of Detroit, the automaker was founded by Henry Ford and incorporated on June 16, 1903. In addition to the Ford, Lincoln, and Mercury brands, Ford also owns Volvo Cars of Sweden, and a small stake in Mazda of Japan and Aston Martin of England. Ford's former UK subsidiaries Jaguar and Land Rover were sold to Tata Motors of India in March 2008.

Ford introduced methods for large-scale manufacturing of cars and large-scale management of an industrial workforce using elaborately engineered manufacturing sequences typified by moving assembly lines. Henry Ford's methods came to be known around the world as Fordism by 1914.

In 2007, Ford fell from the second-ranked automaker to the third-ranked automaker in US sales for the first time in 56 years, behind General Motors and Toyota. Based on 2007 global sales, Ford fell to the fourth-ranked spot behind Volkswagen. By 2009, Ford had become the second largest automaker in Europe (only behind Volkswagen), with large markets in the United Kingdom and Germany and sales that exceed those in the United States. Ford is the seventh-ranked overall American-based company in the 2008 Fortune 500 list, based on global revenues in 2008 of \$146.3 billion. In 2008, Ford produced 5.532 million automobiles and employed about 213,000 employees at around 90 plants and facilities worldwide. Starting in 2007, Ford received more initial quality survey awards from J. D. Power and Associates than any other automaker. Five of Ford's vehicles ranked at the top of their categories and fourteen vehicles ranked in the top three.

History

The Ford Motor Company was launched in a converted factory in 1903 with \$28,000 in cash from twelve investors, most notably John and Horace Dodge (who would later found their own car company). Henry's first attempt under his name was the Henry Ford Company on November 3, 1901, which became the Cadillac Motor Company on August 22, 1902. During its early years, the company produced just a few cars a day at its factory on Mack Avenue in Detroit, Michigan. Groups of two or three men worked on each car from components made to order by other companies. Henry Ford was 40 years old when he founded the Ford Motor Company, which would go on to become one of the world's largest and most profitable companies, as well as being one to survive the Great Depression. As one of the largest family-controlled companies in the world, the Ford Motor Company has been in continuous family control for over 100 years.



Corporate governance

Members of the board as of early 2007 are: Chief Sir John Bond, Richard Manoogian, Stephen Butler, Ellen Marram, Kimberly Casiano, Alan Mulally (President and CEO), Edsel Ford II, Homer Neal, William Clay Ford Jr., Jorma Ollila, Irvine Hockaday Jr., John L. Thornton and William Clay Ford (Director Emeritus).

The main corporate officers are: Lewis Booth (Executive Vice President, Chairman (PAG) and Ford of Europe), Mark Fields (Executive Vice President, President of The Americas), Donat Leclair (Executive Vice President and CFO), Mark A. Schulz (Executive Vice President, President of International Operations) and Michael E. Bannister (Group Vice President; Chairman & CEO Ford Motor Credit). Paul Mascarenas (Vice President of Engineering, The Americas Product Development)

Recent company developments

During the mid to late 1990s, Ford sold large numbers of vehicles, in a booming American economy with soaring stock market and low fuel prices. With the dawn of the new century, legacy healthcare costs, higher fuel prices, and a faltering economy led to falling market shares, declining sales, and sliding profit margins. Most of the corporate profits came from financing consumer automobile loans through Ford Motor Credit Company.

By 2005, corporate bond rating agencies had downgraded the bonds of both Ford and GM to junk status, citing high U.S. health care costs for an aging workforce, soaring gasoline prices, eroding market share, and dependence on declining SUV sales for revenues. Profit margins decreased on large vehicles due to increased "incentives" (in the form of rebates or low interest financing) to offset declining demand.

In the face of demand for higher fuel efficiency and falling sales of minivans, Ford moved to introduce a range of new vehicles, including "Crossover SUVs" built on unibody car platforms, rather than more body-on-frame chassis. In developing the hybrid electric powertrain technologies for the Ford Escape Hybrid SUV, Ford licensed similar Toyota hybrid technologies to avoid patent infringements. Ford announced that it will team up with electricity supply company Southern California Edison (SCE) to examine the future of plug-in hybrids in terms of how home and vehicle energy systems will work with the electrical grid. Under the multi-million-dollar, multi-year project, Ford will convert a demonstration fleet of Ford Escape Hybrids into plug-in hybrids, and SCE will evaluate

how the vehicles might interact with the home and the utility's electrical grid. Some of the vehicles will be evaluated "in typical customer settings," according to Ford.

In December 2006, the company raised its borrowing capacity to about \$25 billion, placing substantially all corporate assets as collateral to secure the line of credit. Chairman Bill Ford has stated that "bankruptcy is not an option". In order to control its skyrocketing labor costs (the most expensive in the world), the company and the United Auto Workers, representing approximately 46,000 hourly workers in North America, agreed to a historic contract settlement in November 2007 giving the company a substantial break in terms of its ongoing retiree health care costs and other economic issues. The agreement includes the establishment of a company-funded, independently-run Voluntary Employee Beneficiary Association (more commonly known as a VEBA) trust to shift the burden of retiree health care from the company's books, thereby improving its balance sheet. However, this arrangement will not begin to take effect until January 1, 2010. The agreement also gives hourly workers the job security they were seeking by having the company commit to substantial investments in most of its factories.

The automaker reported the largest annual loss in company history in 2006 of \$12.7 billion, and estimated that it would not return to profitability until 2009. However, Ford surprised Wall Street in the second quarter of 2007 by posting a \$750 million profit. Despite the gains, the company finished the year with a \$2.7 billion loss, largely attributed to finance restructuring at Volvo.

In June 2, 2008, Ford sold its Jaguar and Land Rover operations to Tata Motors for \$2.3 billion.

In January 2008, Ford launched a website listing the ten *Built Ford Tough* rules as well as a series of webisodes that parodied the show *COPS (TV Series)*.

During November 2008, Ford, together with Chrysler and General Motors, sought financial aid at Congressional hearings in Washington D.C. in the face of worsening conditions caused by the automotive industry crisis. The three companies presented action plans for the sustainability of the industry. The Detroit based automakers were unsuccessful at obtaining assistance through Congressional legislation. GM and Chrysler later received assistance through the Executive Branch from the T.A.R.P. funding provisions. On December 19, the cost of credit default swaps to insure the debt of Ford was 68 percent the sum insured for five years in addition to annual payments of 5 percent. That means it costs \$6.8 million paid upfront to insure \$10 million in debt, in addition to payments of \$500,000 per year. In January 2009, Ford announced a \$14.6 billion loss in the preceding year, making 2008 its worst year in history. Still, the company claimed to have sufficient liquidity to fund its business plans and thus, did not ask for government aid.



"The Way Forward"

In the latter half of 2005, Chairman Bill Ford asked newly-appointed Ford Americas Division President Mark Fields to develop a plan to return the company to profitability. Fields previewed the Plan, dubbed *The Way Forward*, at the December 7, 2005 board meeting of the company; and it was unveiled to the public on January 23, 2006. "The Way Forward" includes resizing the company to match current market realities, dropping some unprofitable and inefficient models, consolidating production lines, and shutting fourteen factories and cutting 30,000 jobs.

These cutbacks are consistent with Ford's roughly 25% decline in U.S. automotive market share since the mid-late 1990s. Ford's target is to become profitable again in 2009, a year later than projected. Ford's realignment also includes the sale of its wholly owned subsidiary, Hertz Rent-a-Car to a private equity group for \$15 billion in cash and debt acquisition. The sale was completed on December 22, 2005. A 50-50 joint venture with Mahindra and Mahindra Limited of India, called Mahindra Ford India, Limited (MIFL), ended with Ford buying out Mahindra's remaining stake in the company in 2005. Ford had previously upped its stake to 72% in 1998.

Chairman and Chief Executive Officer Ford also became President of the company in April 2006, with the retirement of Jim Padilla. Five months later, in September, he stepped down as President and CEO, and naming Alan Mulally as his successor. Bill Ford continues as Executive Chairman, along with an executive operating committee made up of Mulally, Mark Schulz, Lewis Booth, Don Leclair, and Mark Fields.

Online

The domain *ford.com* attracted at least 11 million visitors annually by 2008 according to a Compete.com survey.

Brands and marques

Today, Ford Motor Company manufactures automobiles under several names including Lincoln and Mercury in the United States. In 1958, Ford introduced a new marque, the Edsel, but poor sales led to its discontinuation in 1960. Later, in 1985, the Merkur brand was introduced to market Fords from Europe in the United States; it met a similar fate in 1989.

Ford has major manufacturing operations in Canada, Mexico, the United Kingdom, Germany, Turkey, Brazil, Argentina, Australia, the People's Republic of China, and several other countries, including South Africa where, following divestment during apartheid, it once again has a wholly owned subsidiary. Ford also has a cooperative agreement with Russian automaker GAZ.

Ford acquired British sports car maker Aston Martin in 1989, but sold it on March 12, 2007, retaining a small minority stake, and Volvo Cars of Sweden. In November 2008 it reduced its 33.4% Controlling interest in Mazda of Japan, to a 13.4% non-controlling interest. It shares an American joint venture plant in Flat Rock, Michigan called Auto Alliance with Mazda. It has spun off its parts division under the name Visteon.

Ford sold the United Kingdom-based Jaguar and Land Rover companies and brands to Tata Motors of India in



March 2008. Also in 2008, Ford Motor is in negotiations with Shanghai Automotive Industry Corporation to sell its Volvo cars division. Ford's *FoMoCo* parts division sells aftermarket parts under the Motorcraft brand name. Ford's non-manufacturing operations include organizations such as automotive finance operation Ford Motor Credit Company. Ford also sponsors numerous events and sports facilities around the nation, most notably Ford Center in downtown Oklahoma City and Ford Field in downtown Detroit. Overall the Ford Motor Company controls the following operational car marques: Ford, Lincoln, Mercury, and Volvo Cars. In 2008 the Lincoln-Mercury brand dropped on the American Customer Satisfaction Index list to 83, from 86 in 2007.

Global markets

Initially, Ford Motor Company models sold outside the U.S. were essentially versions of those sold on the home market, but later on, models specific to Europe were developed and sold. Attempts to globalize the model line have often failed, with Europe's Ford Mondeo selling poorly in the United States as the Ford Contour, while U.S. models such as the Ford Taurus have fared poorly in Japan and Australia, even when produced in right hand drive. The small European model Ka, a hit in its home market, did not catch on in Japan, as it was not available as an automatic. The Mondeo was dropped by Ford Australia, because the segment of the market in which it competes had been in steady decline, with buyers preferring the larger local model, the Falcon. One recent exception is the European model of the Focus, which has sold strongly on both sides of the Atlantic. From 2003, Toyota outsold Ford Motor worldwide. From the second quarter 2006, Toyota has passed Ford as the #2 automaker, by sales, in the United States. Ford is in partnership talks to license hybrid technology from the Toyota Motor Corporation in a deal that could help establish Toyota's system as a standard for the industry.

Europe

At first, Ford in Germany and Ford in Britain built different models from one another until the late 1960s, with the Ford Escort and then the Ford Capri being common to both companies. Later on, the Ford Taunus and Ford Cortina became identical, produced in left hand drive and right hand drive respectively. Rationalization of model ranges meant that production of many models in the UK switched to elsewhere in Europe, including Belgium and Spain as well as Germany. The Ford Sierra replaced the Taunus and Cortina in 1982, drawing criticism for its radical aerodynamic styling, which was soon given nicknames such as "Jellymould" and "The Salesman's Spaceship."

Increasingly, the Ford Motor Company has looked to Ford of Europe for its "world cars," such as the Mondeo, Focus, and Fiesta, although sales of European-sourced Fords in the U.S. have been disappointing. In Asia, models from Europe are not as competitively priced as Japanese-built rivals, nor are they perceived as reliable. The Focus has been one exception to this, which has become America's best selling compact car since its launch in 2000.

In February 2002, Ford ended car production in the UK. It was the first time in 90 years that Ford cars had not been made in Britain, although production of the Transit van continues at the company's Southampton facility, engines at Bridgend and Dagenham, and transmissions at Halewood. Development of European Ford is broadly split between Dunton in Essex (powertrain, Fiesta/Ka, and commercial vehicles) and Cologne (body, chassis, electrical, Focus, Mondeo) in Germany. Ford also produced the Thames range of commercial vehicles, although the use of this brand name was discontinued circa 1965. Elsewhere in continental Europe, Ford assembles the Mondeo range in Genk (Belgium), Fiesta in Valencia (Spain) and Cologne



(Germany), Ka in Valencia, and Focus in Valencia, Saarlouis (Germany) and Vsevolozhsk (Russia). Transit production is in Kocaeli (Turkey), Southampton (UK), and Transit Connect in Kocaeli. Ford also owns a joint-venture production plant in Turkey. Ford-Otosan, established in the 1970s, manufactures the Transit Connect compact panel van as well as the "Jumbo" and long wheelbase versions of the full-size Transit. This new production facility was set up near Kocaeli in 2002, and its opening marked the end of Transit assembly in Genk. Another joint venture plant near Setúbal in Portugal, set up in collaboration with Volkswagen, formerly assembled the Galaxy people-carrier as well as its sister ships, the VW Sharan and Seat Alhambra. With the introduction of the third generation of the Galaxy, Ford has moved the production of the people-carrier to the Genk plant, with Volkswagen taking over sole ownership of the Setubal facility. Ford Europe has broken new ground with a number of relatively futuristic car launches over the last 50 years. Its 1959 Anglia two-door saloon was one of the most quirky-looking small family cars in Europe at the time of its launch, but buyers soon became accustomed to its looks and it was hugely popular with British buyers in particular. It was still selling well when replaced by the more practical Escort in 1967. The third incarnation of the Ford Escort was launched in 1980 and marked the company's move from rear-wheel drive saloons to front-wheel drive hatchbacks in the small family car sector. It also offered levels of style, comfort and refinement which were almost unmatched on comparable cars of this era. The fourth generation Escort was produced from 1990 until 2000, although its successor - the Focus - had been on sale since 1998. On its launch, the Focus was arguably the most dramatic-looking and fine-handling small family cars on sale, and sold in huge volumes right up to the launch of the next generation Focus at the end of 2004. The 1982 Ford Sierra - replacement for the long-running and massively popular Cortina and Taunus models - was a style-setter at the time of its launch. Its ultramodern aerodynamic design was a world away from a boxy, sharp-edged Cortina, and it was massively popular just about everywhere it was sold. A series of updates kept it looking relatively fresh until it was replaced by the front-wheel drive Mondeo at the start of 1993. The rise in popularity of small cars during the 1970s saw Ford enter the mini-car market in 1976 with its Fiesta hatchback. Most of its production was concentrated at Valencia in Spain, and the Fiesta sold in huge figures from the very start. An update in 1983 and the launch of an all-new model in 1989 strengthened its position in the small car market.

Asia Pacific

In Australia and New Zealand, the popular Ford Falcon has long been considered the average family car and is considerably larger than the Mondeo, Ford's largest car sold in Europe. Between 1960 and 1972, the Falcon was based on a U.S. model of the same name, but since then has been entirely designed and manufactured in Australia, occasionally being manufactured in New Zealand. Like its General Motors rival, the Holden Commodore, the Falcon utilizes a rear wheel drive layout. High performance variants of the Falcon running locally-built engines produce up to 362 hp (270 kW). A ute (short for "utility," known in the US as pickup truck) version is also available with the same range of drivetrains. In addition, Ford Australia sells highly-tuned limited production Falcon sedans and utes through its performance car division, Ford Performance Vehicles.

In Australia, the Commodore and Falcon have traditionally outsold all other cars and comprise over 20% of the new car market. In New Zealand, Ford was second in market share in the first eight months of 2006 with 14.4 per cent.^[40] More recently Ford has axed its Falcon-based LWB variant of its lineup - the Fairlane and LTD ranges, and announced that their Geelong engine manufacturing plant may be shut down from 2013. They have also announced local manufacturing of the Focus small car starting from 2011.

However, with the acquisition of a stake in Japanese manufacturer Mazda in 1979, Ford began selling Mazda's Familia and Capella (also known as the 323 and 626) as the Ford Laser and Telstar, replacing the European-sourced Escort and Cortina.

In Australia, the Laser was one of Ford Australia's most successful models and was manufactured in Ford's Homebush plant from 1981 until the plant's closure in September 1994. It outsold the Mazda 323, despite being almost identical to it, due to the fact the Laser was manufactured in Australia and Ford was perceived as a local brand.

In New Zealand, the Ford Laser and Telstar were assembled alongside the Mazda 323 and 626 until 1997, at the Vehicle Assemblers of New Zealand (VANZ) plant in Wiri, Auckland. The Sierra wagon was also assembled in New Zealand, owing to the popularity of station wagons in that market.

Through its relationship with Mazda, Ford also acquired a stake in South Korean manufacturer Kia, which built the (Mazda-based) Ford Festiva from 1988-1993, and the Ford Aspire from 1994-1997 for export to the United States, but later sold their interest to Hyundai (which also manufactured the Ford Cortina until the 1980s). Kia continued to market the Aspire as the Kia Avella, later replaced by the Rio and once again sold in the US.

Ford's presence in Asia has traditionally been much smaller, confined to Malaysia, Singapore, Hong Kong, the Philippines, and Taiwan, where Ford has had a joint venture with Lio Ho since the 1970s. Ford began assembly of cars in Thailand in 1960, but withdrew from the country in 1976, and did not return until 1995, when it formed a joint venture with Mazda called Auto Alliance.

Ford India began production in 1998 with its Ford Escort model, which was later replaced by locally produced Ford Ikon in 2001. It has since added Fusion, Fiesta, Mondeo and Endeavour to its product line.

South America

In South America, Ford has had to face protectionist government measures in each country, with the result that it built different models in different countries, without particular regard to rationalization or economy of scale inherent to producing and sharing similar vehicles between the nations. In many cases, new vehicles in a country were based on those of the other manufacturers it had entered into production agreements with, or whose factories it had acquired. For example, the Corcel and Del Rey in Brazil were originally based on Renault vehicles.

In 1987, Ford of Brasil and Ford of Argentina merged its operations with those of Volkswagen to form a company called Autolatina, with which it shared models. Sales figures and profitability were disappointing, and Autolatina was dissolved in 1995. With the advent of Mercosur, the regional common market, Ford was finally able to rationalize its product line-ups in those countries. Consequently, the Ford Fiesta and Ford EcoSport are only built in Brazil, and the Ford Focus only built in Argentina, with each plant exporting in large volumes to the neighboring countries. Models like the Ford Mondeo from Europe could now be imported completely built up. Ford of Brazil produces a pick-up truck version of the Fiesta, the Courier, which is also produced in South Africa as the Ford Bantam in right hand drive versions.

Africa and Middle East

In Africa Ford's market presence has traditionally been strongest in South Africa and neighboring countries, with only trucks being sold elsewhere on the continent. Ford in South Africa began by importing kits from Canada to be assembled at its Port Elizabeth facility. Later Ford sourced its models from the UK and Australia, with local versions of the Ford Cortina including the XR6, with a 3.0 V6 engine, and a Cortina 'bakkie' or pick-up, which was exported to the UK. In the mid-1980s Ford merged with a rival company, owned by Anglo American, to form the South African Motor Corporation (Samcor).

Following international condemnation of apartheid, Ford divested from South Africa in 1988, and sold its stake in Samcor, although it licensed the use of its brand name to the company. Samcor began to assemble Mazdas as well, which affected its product line-up, which saw the European Fords like the Escort and Sierra replaced by the Mazda-based Laser and Telstar. Ford bought a 45 per cent stake in Samcor following the demise of apartheid in 1994, and this later

became, once again, a wholly owned subsidiary, the Ford Motor Company of Southern Africa. Ford now sells a local sedan version of the Fiesta (also built in India and Mexico), and the Focus and Mondeo Europe. The Falcon model from Australia was also sold in South Africa, but was dropped in 2003.

Ford's market presence in the Middle East has traditionally been even smaller, partly due to previous Arab boycotts of companies dealing with Israel. Ford and Lincoln vehicles are currently marketed in ten countries in the region. Saudi Arabia, Kuwait, and the UAE are the biggest markets. Ford also established itself in Egypt in 1926, but faced an uphill battle during the 1950s due to the hostile nationalist business environment. Ford's distributor in Saudi Arabia announced in February 2003 that it had sold 100,000 Ford and Lincoln vehicles since commencing sales in November 1986. Half of the Ford/Lincoln vehicles sold in that country were Ford Crown Victorias.^[44] In 2004, Ford sold 30,000 units in the region, falling far short of General Motors' 88,852 units and Nissan Motors' 75,000 units.

Environmental initiatives

Flexible fuel vehicles

Flexible fuel vehicles are designed to operate smoothly using a wide range of available ethanol fuel mixtures—from pure gasoline, to bioethanol-gasoline blends such as E85 (85% ethanol and 15% gasoline) or E100 (neat hydrous ethanol) in Brazil. Part of the challenge of successful marketing alternative and flexible fuel vehicles in the U.S., is the general lack of establishment of sufficient fueling stations, which would be essential for these vehicles to be attractive to a wide range of consumers. Significant efforts to ramp up production and distribution of E85 fuels are underway and expanding.

Ford is also planning to produce 250,000 E85-capable vehicles a year in the US, adding to some 1.6 million already sold in the last 10 years.

Current Ford E85 Flexible Fuel Vehicles sold in North America and Europe are:

- Ford F-150
- Ford Crown Victoria
- Ford Focus Flexifuel / Focus C-MAX (Europe).
- Ford Taurus
- Ford Ranger
- Ford Explorer
- Mercury Grand Marquis
- Lincoln Town Car

Current Ford E100 Flex sold in the Brazilian market are:

- Courier
- Ford EcoSport
- Ford Fiesta
- Ford Focus
- Ford Ka

Hydrogen

Ford also continues to study Fuel Cell-powered electric powertrains, and has demonstrated hydrogen-fueled internal combustion engine technologies, as well as developing the next-generation hybrid-electric systems. Compared with conventional vehicles, hybrid vehicles and/or fuel cell vehicles decrease air pollution emissions as well as sound levels, with favorable impacts upon respiratory health and decrease of noise health effects.

Ford has launched the production of hydrogen-powered shuttle buses, using hydrogen instead of gasoline in a standard internal combustion engine, for use at airports and convention centers. At the 2006 Greater Los Angeles Auto Show, Ford showcased a hydrogen fuel cell version of its Explorer SUV. The Fuel cell Explorer has a combined output of 174 hp (130 kW). It has a large hydrogen storage tank which is situated in the center of the car taking the original place of the conventional model's automatic transmission. The centered position of the tank assists the vehicle reach a notable range of 350 miles (563 km), the farthest for a fuel cell vehicle so far. The fuel cell Explorer the first in a series of prototypes partly funded by the United States Department of Energy to expand efforts to determine the feasibility of hydrogen- powered vehicles. The fuel cell Explorer is one of several vehicles with green technology Ford being featured at the L.A. show, including the 2008 Ford Escape Hybrid, PZEV emissions compliant Fusion and Focus models and a 2008 Ford F-Series Super Duty outfitted with Ford's clean diesel technology.

Electric vehicles

Ford Motor Co. expects electric vehicles will represent a "major portion" of its lineup a decade from now as the automaker breaks away from a recent reliance on pickup trucks and SUVs. The stakes are high because Ford's stepped-up investment is coming at a time when the U.S. government is demanding steep increases in fuel economy and has put money forward to help automakers adopt new fuel-saving technologies.

Hybrid electric vehicles

Ford did improve fuel efficiency during 2005, with the introduction of the Hybrid-Electric Escape. With this vehicle, Ford was third to the automotive market with a hybrid electric vehicle and the first hybrid electric SUV to market. This was also the first hybrid electric vehicle with a flexible fuel capability to run on E85. The Escape's platform mate Mercury Mariner was also available with the hybrid-electric system in the 2006 model year—a full year ahead of schedule. The similar Mazda Tribute will also receive a hybrid-electric powertrain option, along with many other vehicles in the Ford vehicle line.



In 2005 Ford announced its goal to make 250,000 hybrids a year by 2010, but by mid-2006 announced that it would not meet that goal, due to excessively high costs and the lack of sufficient supplies of the hybrid-electric batteries and drivetrain system components. Instead, Ford has committed to accelerating development of next-generation hybrid-electric power plants in Britain, in collaboration with Volvo. This engineering study is expected to yield more than 100 new hybrid-electric vehicle models and derivatives. There are also plans for hybrid versions of the Ford Edge and Lincoln MKX.

Ford announced on 2007-07-09 that it will team up with Southern California Edison (SCE) to examine the future of plug-in hybrids in terms of how home and vehicle energy systems will work with the electrical grid. Under the multi-million-dollar, multi-year project, Ford will convert a demonstration fleet of Ford Escape Hybrids into plug-in hybrids, and SCE will evaluate how the vehicles might interact with the home and the utility's electrical grid. Some of the vehicles will be evaluated "in typical customer settings," according to Ford.

On June 12, 2008 USDOE expanded its own fleet of alternative fuel and advanced technology vehicles with the addition of a Ford Escape Plug-In Hybrid Flex-Fuel Vehicle. The vehicle is equipped with a 10-kilowatt lithium-ion battery supplied by Johnson Controls-Saft that stores enough electric energy to drive up to 30 miles (48 km) at speeds of up to 40 mph (64 km/h).

In March 2009 Ford launched to the U.S. market the Ford Fusion Hybrid and the Mercury Milan Hybrid, both as 2010 models.

Ford is going to introduce a plug-in hybrid challenge the Chevy Volt by 2012 and more charge-maintaining hybrids (traditional gas-electric hybrids), beginning with one in 2011.

Current and planned Ford hybrid electric vehicles:

- 2004– Ford Escape Hybrid
- 2006– Mercury Mariner
- 2009– Ford Fusion Hybrid/Mercury Milan
- 2009/10– Ford Edge/Lincoln MKX

All-electric vehicles

Ford ended the Think City experiment and ordered all the cars repossessed and destroyed, even as many of the people leasing them begged to be able to buy the cars from Ford. After outcry from the lessees and activists in the US and Norway, Ford returned the cars to Norway for sale.

Bill Ford was one of the first top industry executives to make regular use of a battery electric vehicle, a Ford Ranger EV, while the company contracted with the United States Postal Service to deliver electric postal vans based on the Ranger EV platform. Ford discontinued a line of electric Ranger pickup trucks and ordered them destroyed, though it reversed in January 2005, after environmentalist protest.

The North American Focus has been modified to take batteries. The variant, known as the Focus RV, is planned to be launched in 2011. Ford plans to have 10,000 of these battery-powered cars on the road beginning in 2011 in partnership with Magna International and it will be a global vehicle that will be sold in the three key markets of North America, Europe and Asia-Pacific. The Focus compact can travel about 160 kilometres before it needs to be charged.

Current and planned Ford hybrid electric vehicles:

- 2010 All-electric commercial van.
- 2011 All-electric small car in 2011 (Ford Focus RV).

Compressed natural gas

The alternative fossil fuel vehicles, such as some versions of the Crown Victoria especially in fleet and taxi service, operate on compressed natural gas—or CNG. Some CNG vehicles have dual fuel tanks - one for gasoline, the other for CNG - the same engine can operate on either fuel via a selector switch.

Increased fuel efficiency

Ford Motor Company announced it will accelerate its plans to produce more fuel-efficient cars, changing both its North American manufacturing plans and its lineup of vehicles available in the United States. In terms of North American manufacturing, the company will convert three existing truck and sport utility vehicle (SUV) plants for small car production, with the first conversion starting in December at its Michigan Truck Plant. In addition, Ford's assembly plants near Mexico City, Mexico, and in Louisville, Kentucky, will convert from pickups and SUVs to small cars, including the Ford Fiesta, by 2011. Ford will also introduce to North America six of its European small vehicles, including two versions of the Ford Fiesta, by the end of 2012. And last but not least, Ford is stepping up its production of fuel-efficient "EcoBoost" V-6 and four-cylinder engines, while increasing its production of hybrid vehicles. See the Ford press release.

Given Ford's new emphasis on its European vehicles, a virtual trip to the British International Motor Show in London is in order. Ford is displaying five models of its all-new Fiesta at the auto show, which opened to the public on July 23. Among the models on display is the world debut of Ford's "ECONetic" version of the Ford Fiesta, which combines more aerodynamic styling, a lowered suspension, low-rolling-resistance tires, low-friction oil, and a specially tuned, turbocharged, direct-injection diesel engine. As a result, it achieves 63.6 miles per US gallon (3.70 L/100 km; 76.4 mpg_{imp}) on the European combined test cycle, which generally yields higher fuel economy numbers than the U.S. test methods (note also that the U.K. gallon is about 20% larger than the U.S. gallon, so we've adjusted these numbers accordingly). The standard diesel version of the Fiesta achieves 52.3 mpg, while diesel versions of the European Ford Focus achieve 52.3 mpg for most body styles and 54.7 mpg for the ECONetic model. Of course, the United States has stricter emissions rules than in Europe, so it may not be possible for Ford to offer similar models in the United States.

Ford has challenged University teams to create a vehicle that is simple, durable, lightweight and come equipped with a base target price of only \$7,000 The students from Aachen University created the "2015 Ford Model T".

In 2000, under the leadership of the current Ford chairman, William Clay Ford, the Company announced a planned 25 percent improvement in the average mileage of its light truck fleet – including its popular SUVs – to be completed by the 2005 calendar year. In 2003, Ford announced that competitive market conditions and technological and cost challenges would prevent the company from achieving this goal.

Researchers at the University of Massachusetts have, however, listed Ford as the seventh-worst corporate producer of air pollution, primarily because of the manganese compounds, 1,2,4-trimethylbenzene, and glycol ethers released from its casting, truck, and assembly plants. The United States Environmental Protection Agency has linked Ford to 54 Superfund toxic waste sites, twelve of which have been cleaned up and deleted from the list.

For the 2007 model year, Ford had thirteen U.S. models that achieve 30 miles per gallon or better (based on the highway fuel economy estimates of the EPA and several of Ford's vehicles were recognized in the EPA and Department of Energy Fuel Economy Guide for best-in-class fuel economy. Ford claimed to have eliminated nearly three million pounds of smog-forming emissions from their U.S. cars and light trucks over the 2004 to 2006 model years.

Auto racing

NASCAR

Ford is one of four manufacturers in NASCAR's three major series: Sprint Cup Series, Nationwide Series, and Camping World Truck Series. Major teams include Roush Fenway Racing and Yates Racing. Ford is represented by the mid-size Fusion in the Sprint Cup and Nationwide Series, and by the F-150 in the Camping World Truck Series. Some of the most successful NASCAR Fords were the aerodynamic fastback Ford Torino and Mercury Montegos, and the aero-era Ford Thunderbirds. The Ford nameplate has won eight manufacturer's championships in Sprint Cup, while Mercury has won one.

Formula One

Ford was heavily involved in Formula One for many years, and supplied engines to a large number of teams from 1967 until 2004. These engines were designed and manufactured by Cosworth, the racing division that was owned by Ford from 1998 to 2004. Ford-badged engines won 176 Grands Prix between 1967 and 2003 for teams such as Team Lotus and McLaren. Ford entered Formula One as a constructor in 2000 under the Jaguar Racing name, after buying the Stewart Grand Prix team which had been its primary 'works' team in the series since 1997. Jaguar achieved little success in Formula One, and after a turbulent five seasons, Ford withdrew from the category after the 2004 season, selling both Jaguar Racing (which became Red Bull Racing) and Cosworth (to Gerald Forsythe and Kevin Kalkhoven).

Rally

Ford has a long history in rallying and has been active in the World Rally Championship since the beginning of the world championship, the 1973 season. Ford took the 1979 manufacturers' title with Hannu Mikkola, Björn Waldegård and Ari Vatanen driving the Ford Escort RS1800. In the Group B era, Ford achieved success with Ford RS200. Since the 1999 season, Ford has used various versions of the Ford Focus WRC to much success. In the 2006 season, BP-Ford World Rally Team secured Ford its second manufacturers' title, with the Focus RS WRC 06 built by M-Sport and driven by *Flying Finns* Marcus Grönholm and Mikko Hirvonen.^[66] Continuing with Grönholm and Hirvonen, Ford successfully defended the manufacturers' world championship in the 2007 season. Ford is the only manufacturer to score in the points for 92 consecutive races; since the 2002 season opener Monte Carlo Rally.

Sports cars

Ford sports cars have always been visible in the world of endurance racing. Most notably the GT40 won the prestigious 24 Hours of Le Mans four times in the 1960s and still stands today as one of the all-time greatest racing cars. The GT40 is the only American car to ever win overall at Le Mans. In 2007 Swiss Matech Racing in collaboration with Ford Racing is opened a new chapter in the annals of the Ford GT. A winning chapter Ford GT Matech team won win title in the European FIA GT3 Championship 2008.

The Ford Mustang has arguably been Ford's most successful sports car. The Mustang won the SCCA Pro B National Championship in 1965 at the hands of Jerry Titus who went on to win the SCCA Trans-Am Championship in another Mustang two year later in 1967. Ford won the Trans-Am Championship again in 1970 with Parnelli Jones and George Folmer driving Boss 302s for Bud Moore Engineering. Ford took the 1985 and 1986 IMSA GTO Championship with Mustangs driven by John Jones and Scott Pruett before returning to Trans-Am glory with a championship in 1989 with Dorsey Schrader. Ford dominated Trans-Am in the 1990s with Tommy Kendall winning championships in 1993, 1995, 1996, and 1997 with Paul Gentilozzi adding yet another title in 1999. In 2005 the Ford Mustang FR500C took the championship in the Rolex Koni Challenge Series in its first year on the circuit. In 2007 Ford added a championship in the GT4 European Championship. In 2008 Ford added FR500GT at Ford GT a championship in the FIA GT3 European Championship. 2008 is the first year of the Mustang Challenge for the Miller Cup a new series which pits a full field of identical factory built Ford Mustang race cars against each other. Also in 2008 Ford won both the drivers and manufacturers championship in the Koni Challenge Series with Joe Foster and Steve Maxwell driving HyperSport.

Touring cars

Ford has campaigned touring cars such as the Focus, Falcon, and Contour/Mondeo and the Sierra Cosworth in many different series throughout the years. Notably, the Mondeo finished 1,2,3 in the British Touring Car Championship in 2000, and the Falcon finished 1,2,3 in the Australian V8 Supercar Series in 2005.

Other

In the Indianapolis 500, Ford powered IndyCars won 17 times between 1965 and 1996. Ford has also branched out into drifting with the introduction of the new model Mustang. Most noticeable is the Turquoise and Blue Falken Tires Mustang driven by Vaughn Gittin Jr, A.K.A. "JR". with 750 RWHP (Rear Wheel Horsepower). In drag racing, John Force has piloted his Drag Ford Mustang to several NHRA funny-car titles in recent seasons. Formula Ford, a formula for single-seater cars without wings and originally on road tires were conceived in 1966 in the UK as an entry-level formula for racing drivers. Many of today's racing drivers started their car racing careers in this category.

Ford trucks

Ford has produced trucks since 1908. Countries where Ford commercial vehicles are or were made include Argentina, Australia, Brazil, Canada (badged Mercury too), France, Germany, India, Netherlands, Philippines, Spain (badged Ebro too), Turkey, UK (badged also Fordson and Thames) and USA.

Most of all these ventures are now extinct. The European one that lasted longer was the lorries arm of Ford of Britain, that was eventually sold to Iveco group in 1986, and whose last significant models were the Transcontinental and the Cargo.

In the USA, Ford's heavy trucks division (Classes 7 and 8) was sold in 1997 to Freightliner Trucks, now part of Daimler AG, which rebranded it as Sterling and augmented the lineup with rebranded trucks from Freightliner and Dodge; the division is currently shutting down operations. Ford continues building medium class trucks with the F-650 and F-750 Ford F-Series and recently introduced the LCF series



similar in design to the Ford Cargo trucks of the past.

Bus products

Ford has manufactured buses in the company's early history, but most Ford buses are built on Ford chassis by other manufacturers.

Ford tractors

The "Henry Ford and Son Company" began making Fordson tractors in Henry's hometown of Springwells (later part of Dearborn, Michigan from 1907 to 1928, from 1919 to 1932, at Cork, Ireland and 1933-1964 at Dagenham, England, later transferred to Basildon. They were also produced in Leningrad beginning in 1924. In 1986, Ford expanded its tractor business when it purchased the Sperry-New Holland skid-steer loader and hay baler, hay tools and implement company from Sperry Corporation and formed Ford-New Holland which bought out Versatile tractors in 1988. This company was bought by Fiat in 1993 and the name changed from Ford New Holland to New Holland. New Holland is now part of CNH Global.

Criticism

Throughout its history, the company has faced a wide range of criticisms. Some have accused the early Fordist model of production of being exploitative, and Ford has been criticized as being willing to collaborate with dictatorships or hire mobs to intimidate union leaders and increase their profits through unethical means.

Ford refused to allow collective bargaining until 1941, with the Ford Service Department being set up as an internal security, intimidation, and espionage unit within the company, and quickly gained a reputation of using violence against union organizers and sympathizers.

Ford was also criticized for tread separation and tire disintegration of many Firestone tires installed on Ford Explorers, Mercury Mountaineers, and Mazda Navajos, which caused many crashes during the late 1990s and early 2000s. It is estimated that over 250 deaths and more than 3,000 serious injuries resulted from these failures. Although Firestone received most of the blame, some blame fell on Ford, which advised customers to under-inflate the tires in order to reduce the risk of vehicle rollovers.

Alleged Nazi collaboration

Other accusations were that the company collaborated with the German Nazi regime and relied on Germany. The German Ford company used slave labor in Cologne between 1941 and 1945 and it had produced military vehicles such as jeeps, planes, and ships used by a fascist regime. Many of these allegations were made in a series of United States lawsuits in 1998. The lawsuit was dismissed in 1999 because the judge concluded "the issues...concerned international treaties between nations and foreign policy and were thus in the realm of the executive branch."

Detractors point to Henry Ford's outspoken anti-semitism, including his newspaper, The Dearborn Independent, which published The Protocols of the Elders of Zion. They also point to the fact that in 1938, four months after the German annexation of Austria, Ford accepted the Grand Cross of the German Eagle, the Nazi regime's highest honor for foreigners before the outbreak of the war.

Defenders of the company argue that the Ford German division, Fordwerke, had been taken over by the Nazi government after it rose to power, claiming that it was not under the company's control, though Henry Ford, according to court records, did stay in touch with the company. Although Ford's initial motivations were anti-war, the company was heavily involved in the United States Allied war effort after the outbreak of war.

Argentine "Dirty War"

Ford's Argentine subsidiary was accused of collaborating with the Argentine 1976-1983 military dictatorship, actively helping in the political repression of intellectuals and dissidents that was pursued by said government. No result was proven and the company denied the allegations.

In a lawsuit initiated in 1996 by relatives of some of the estimated 600 Spanish citizens who disappeared in Argentina during the "Dirty War", evidence was presented to support the allegation that much of this repression was directed by Ford and the other major industrial firms. According to a 5,000-page report, Ford executives drew up lists of "subversive" workers and handed them over to the military task-forces which were allowed to operate within the factories. These groups allegedly kidnapped, tortured and murdered workers—at times allegedly within the plants themselves. The company denied the allegations.

In a second trial, a report brought by the CTA, and the testimonies of former Ford workers themselves, claimed that the company's Argentine factory was used between 1976 and 1978 as a detention center, and that management allowed the military to set up its own bunker inside the plant. The company denied the allegations.

Ford Pinto

In September 1971 the Ford Motor Company launched the Pinto for the North American market. Through early production of this model it emerged that design flaws could result in fuel tank explosions when the vehicle was subject to a rear-end collision. Some sources even allege this safety data was available to Ford prior to production, but was ignored for economic reasons. Either way, a major scandal followed with the leaking to San Francisco magazine *Mother Jones* of the notorious "Ford Pinto Memo", an internal Ford cost-benefit analysis showing that the cost of implementing design changes to the subcompact's fuel system was greater than the economic cost of the burn injuries and deaths that could be prevented by doing so. Subsequently some have played down the importance of this case as Pinto explosion fatality estimates range widely from 27 to 900, with the lowest figures being allegedly in line with comparable fatality statistics for other car models. Nevertheless, the affair is an infamous example of a big corporation putting profit before human life because one senior Ford executive, at the time of the memo, is alleged to have written of his Pinto customers: it's "cheaper to let them burn".

In the related Ford Pinto product liability case *Grimshaw v. Ford Motor Co.*, 119 Cal. App. 3d 757 (4th Dist. 1981) the California Court of Appeal for the Fourth Appellate District reviewed Ford's conduct and upheld compensatory damages of \$2.5 million and punitive damages of \$3.5 million against Ford. Of the two plaintiffs, one was killed in the collision that caused her Pinto to explode, and her passenger, 13-year old Richard Grimshaw, was badly burned and scarred for life.

































