



SUBARU®





Subaru

Subaru



SUBARU

Type	Division of Fuji Heavy Industries
Founded	FHI established July 7, 1953 first Subaru car introduced 1954
Founder(s)	Kenji Kita Chikuhei Nakajima (predecessor)
Headquarters	Ōta, Gunma, Japan
Industry	Automobile manufacturing
Products	Subaru automobiles, Toyota automobiles assembled under contract
Website	subaru-global.com

Subaru (スバル?) is the automobile manufacturing division of Japanese transportation conglomerate Fuji Heavy Industries Co., Ltd. (FHI). Subaru is internationally known for their use of boxer engines in most of their vehicles. The company decided to utilize all wheel drive in most international markets as standard equipment in 1996. They also offer many turbocharged versions of their passenger cars, such as the Impreza WRX which is well-known in motor sports, such as rally racing. Other turbocharged models from Subaru include the Forester XT, Outback XT, Impreza WRX STI and Legacy GT Spec.B. Fuji Heavy Industries, the parent company of Subaru, is currently in a partnership with Toyota Motor Corporation, which owns 16.5% of FHI. The company is named after the star cluster Pleiades, which in Greek mythology is known as the Seven Sisters, and in Japanese mythology the name is "Subaru", which roughly translated into English means, "to govern", "unite," or "gather together". The company logo is influenced by the star cluster. The large star in the logo represents Fuji Heavy Industries, and the five smaller stars represent the current five companies that are united under the FHI group.

History

FHI started out as *The Aircraft Research Laboratory* in 1917 headed by Chikuhei Nakajima. In 1932, the company was reorganized as *Nakajima Aircraft Company, Ltd* and soon became the primary manufacturer of aircraft for Japan during World War II. At the end of the Second World War Nakajima Aircraft was again reorganized, this time as *Fuji Sangyo Co, Ltd*. In 1946, the company created the Fuji Rabbit motor scooter with spare aircraft parts from the war. In 1950, Fuji Sangyo was divided into 12 smaller corporations according to the Japanese Government's 1950 Corporate Credit Rearrangement Act, anti-zaibatsu legislation, but between 1953-1955, four of these corporations and a newly formed corporation *Fuji Kogyo*, a scooter manufacturer; coachbuilders *Fuji Jidosha*; engine manufacturers *Omiya Fuji Kogyo*; chassis builders *Utsunomiya Sharyo* and the *Tokyo Fuji Dangyo* trading company decided to merge together to form the *Fuji Heavy Industries* known today.

Kenji Kita, the CEO of Fuji Heavy Industries at the time, wanted the new company to be involved in car manufacturing and soon began plans for building a car with the development code-name P-1. Mr. Kita canvassed the Company for suggestions about naming the P1, but none of the proposals were appealing enough. In the end, he gave the car a Japanese name that had been his personal favorite from childhood: Subaru. The first Subaru car was named the Subaru 1500. Only twenty P1s were manufactured due to multiple supply issues. From 1954 to 2008, the company designed and manufactured dozens of vehicles including the 1500 (1954), the tiny air-cooled 360 (1958), the Sambar (1961), the 1000 (which saw the introduction of the Subaru boxer engine in 1965), the R-2 (1969), the Rex and the Leone (1971), the Alcyone (1985), the Legacy (1989), the Impreza (1993), the Forester (1997), the Tribeca (2005), and the Exiga (2008).

Major shareholders

On October 5, 2005 Toyota Motor Corporation purchased 8.7% of FHI shares from General Motors who had owned 20.1% of FHI since 1999. GM later divested its remaining 11.4% stake, selling its shares on the open market to sever all ties with FHI. FHI previously stated that there might have been 27 million shares (3.4%) acquired before the start of trading by an unknown party on October 6, 2005, and speculation suggested that a bank or perhaps another automaker was involved. After the purchase, Toyota announced a contract with Subaru on March 13, 2006 to use the underutilized Subaru manufacturing facility in Lafayette, Indiana, and Toyota announced plans to hire up to 1,000 workers and set aside an assembly line for the Camry model, beginning in spring 2007. Before GM's ownership, Nissan had acquired a 20% stake in 1968 during a period of government-ordered merging of the Japanese auto industry in order to improve competitiveness under the administration of Prime Minister Eisaku Sato. Nissan would utilize FHI's bus manufacturing capability and expertise for their Nissan Diesel line of buses. In turn, many Subaru vehicles, even today, use parts from the Nissan manufacturing keiretsu. The Subaru automatic transmission, known as



the 4EAT, is also used in the first generation Nissan Pathfinder. Speculation has suggested that it was Subaru that introduced Renault to Nissan, when Renault asked for assistance in all-wheel drive (AWD) technology, and when FHI might have suggested that Renault discuss their plans with Nissan, the discussions may have been a contributing factor to the currently successful Renault-Nissan alliance. Upon Nissan's acquisition by Renault, its 20% stake was sold to General Motors. During the brief General Motors period, a "badge engineered" Impreza was sold in the United States as the Saab 9-2X. A SUV (Subaru Tribeca / SAAB 9-6X) was also planned but the SAAB version did not proceed.

Motor sports

Subaru Rally Team Japan led by Noriyuki Koseki (founder of Subaru Tecnica International STI) ran Subaru Leone coupé, sedan DL, RX (SRX) and RX Turbo in the World Rally Championship between 1980 and 1989 a few rallies per season. Drivers for individual rallies included Ari Vatanen, Per Eklund, Shekhar Mehta, Mike Kirkland, Possum Bourne and Harald Demut. Mike Kirkland finished 6th overall and won the A Group at the 1986 Safari Rally. That year Subaru was one of the only manufactures combining 4WD and turbo. Subaru changed the rally model to Legacy RS for the 1990-1992 period and took part in the first complete season in the World Rally Championship with the same model in 1993.

Modified versions of the Impreza WRX and WRX STi have been competing successfully in rallying; drivers Colin McRae (1995), Richard Burns (2001) and Petter Solberg (2003) have won World Rally Championship drivers' titles with the Subaru World Rally Team, and Subaru took the manufacturers' title three years in a row from 1995 to 1997. Subaru's World Rally Championship cars are prepared and run by Prodrive, the highly successful British motorsport team. Several endurance records were set in the early and mid-nineties by the Subaru Legacy. Subaru was briefly involved in Formula One circuit racing when it bought a controlling interest in the tiny Italian Coloni team for the 1990 season. The Coloni 3B's 12-cylinder engine was badged as a Subaru and shared the boxer layout with the company's own engines, but was an existing design built by Italian firm Motori Moderni. The cars were overweight and underpowered and the partnership broke down before the season finished. With the rise of rally racing, and the Import scene in the US, the introduction of the highly anticipated Subaru Impreza WRX in 2001 was successful in bringing high performance, AWD compact cars into the sports car mainstream.

On the 16 December 2008, it was announced that Subaru would no longer be competing in the World Rally Championships, due to the issues with the current global economic crisis, combined with the prospect of a car which still needed development for the 2009 season and a change in regulations for the 2010 season.



Diesel

The 2007 Frankfurt International Motor Show saw Subaru introduce the world's first production horizontally-opposed, water-cooled, common rail, turbodiesel, using a variable geometry turbocharger. Volkswagen had previously experimented with this idea during the 1950s, and made 2 air-cooled boxer prototype diesel engines that were not turbocharged, and installed one engine in a Type 1 and another in a Type 2. The Subaru engine was rated at 110 kW (150 PS; 148 hp) and 350 N·m (260 ft·lbf) with a displacement of 2.0 litres. In March 2008, Subaru offered the Legacy sedan and wagon and the Outback wagon with the 2.0 litre turbodiesel in the EU with a 5 speed manual transmission only. In September 2008, Subaru announced that the diesel Forester and diesel Impreza will be introduced at the 2008 Paris Motor Show, with Forester sales to begin October 2008 and diesel Impreza sales to start January 2009. The Forester and Impreza will have a 6 speed manual transmission only, whereas the Legacy and Outback have 5 speed manual transmissions only.

United States Environmental Protection Agency fuel economy estimated is:

City Ranges

32.7 mpg_{US} (7.19 L/100 km; 39.3 mpg_{imp})

33.6 mpg_{US} (7.00 L/100 km; 40.4 mpg_{imp})

Highway Ranges

45.2 mpg_{US} (5.20 L/100 km; 54.3 mpg_{imp})

49.0 mpg_{US} (4.80 L/100 km; 58.8 mpg_{imp})

The fuel economy ratings listed are comparable to the Smart For Two. According to the *Subaru Owners* on-line newsletter dated March 2008, Subaru is "currently making modifications to the diesel so it meets the more stringent US standards. Subaru diesel models should be domestically available in two to three years."

Environmental record

Subaru claims to have implemented advanced policies which include recycling, reducing harmful emissions, educating their employees, and continuing their efforts have helped them in their environmental initiatives. The Subaru plant in Lafayette, Indiana (SIA) was the first auto assembly plant to achieve zero landfill status - nothing from its manufacturing efforts goes into a landfill. The company has also developed energy efficient hybrid vehicles as well as a recycling plan for their "end-of-life" cars. Most of their modern products use aluminium throughout the vehicle, in the engine, transmission, suspension and elsewhere in each vehicle, that can be recycled when the vehicle is no longer servicable. An excerpt from the Subaru website stated "In 2006, SIA was awarded the U.S. EPA's Gold Achievement Award as a top achiever in the agency's WasteWise program to reduce waste and improve recycling." The website also stated that "It also became the first U.S. automotive assembly plant to be designated a wildlife habitat." Subaru currently offers a Partial Zero Emissions Vehicle (PZEV) certified Legacy, Outback, and Forester models which are available for sale anywhere in the U.S. Other car makers limit vehicles certified as PZEV in states that have adopted California emission standards. Subaru PZEV vehicles meet California's Super-Ultra-Low-Emission Vehicle exhaust emission standard. All other models have been certified LEV2.

Electric vehicles

Fuji Heavy Industries, Inc. (FHI), the maker of Subaru automobiles launched its Subaru Plug-in Stella electric vehicle, which is a kei car equipped with a lithium-ion battery pack. The vehicle has a short range of 56 miles (90 km) but it actually costs more than the Mitsubishi iMiEV, at 4.725 million yen, or about \$48,200, including consumption taxes, which will probably be exempted. It will qualify for a rebate of up to \$14,100, bringing the price down to \$34,100. The vehicle is much like the i-MiEV, with a 47-kilowatt motor and a quick-charge capability, but the two-door mini-car has a boxy shape. FHI plans to start delivery in late July and plans to sell 170 vehicles by March 2010. In Japan, Subaru is also currently testing two electric vehicles called the Subaru G4e and the Subaru R1e.





















