

My Fiero Story

by Ron Moen

Deming Philosophy

What do Toyota and Fiero have in common? They both had 2-seater mid-engine sports cars in the 1980s. Fiero MR2 was manufactured from 1984-1988 and Toyota 2M4 from 1985-1995. What is common is that both cars operated under the philosophy of W. Edwards Deming.

Dr. Deming was born in Sioux City, Iowa in 1900. He taught his philosophy around the world until his death in 1993. He authored 12 books and received 16 honorary doctorates. He received awards from the Emperor of Japan and the president of the United States. He had much to do with the rebuilding of Japan's postwar industry with his first lectures in Japan in 1949 (first of 25 trips to Japan).

Toyota won the Deming Prize (JUSE) in 1965 and Shoichiro Toyoda, President of Toyota, won the Deming Metal (ASQ) in 2004. He said in his acceptance speech, "The Toyota philosophy is the Deming philosophy." (A portrait of Dr. Deming hangs at Toyota headquarters in Toyota City, Japan.)

Deming's win-win philosophy is based on cooperation, trust, pride, intrinsic motivation, and continual improvement of products, services, and processes. Organizations must adopt the new philosophy through application of his fourteen points. These included: create a constancy of purpose, drive out fear, break down barriers between departments, and end the practice of awarding business to suppliers on the basis of price tag. Organizations must institute a vigorous program of education and self improvement. He often said, "There is no substitute for knowledge."

Deming became popular in the United States after NBC aired the June 1980 program "If Japan can why can't we?" The star of the program was W. Edwards Deming

Deming comes to Pontiac

After viewing the NBC program, Bill Hoglund, General Manager of Pontiac Motor Division of General Motors, and Bob Dorn, Head of Engineering of Pontiac, talked Deming into joining them in 1981. He asked Pontiac to hire a statistician to manage his monthly visits. As a government statistician in Washington DC and a Deming Disciple, I applied and accepted the job offer. Besides interpreting Deming for Pontiac, I spent

much of my time interpreting Pontiac for Deming. I did make time to celebrate Deming's eighty-second birthday with Bill.

It wasn't difficult for me to see the excessive internal competition among the 5 car divisions in GM. Deming asked for a new level of trust between labor and management at Pontiac (not a GM strong point).

In a December 21, 1982 memo to his staff, Bill stated "As managers we accept responsibility to work on the system so that those who work in the system can surface problems, solve them, and take pride in the work they do. I strongly believe Dr. Deming's 14 points."



P-car Project

Bob Dorn introduced Dr. Deming to Turkish born Hulki Aldikacti and the rest of the P-car team which had been given approval from GM for a "2-seater commuter car" in April of 1980. "The big advantage of this program was I didn't have any help," Hulki said, in a reference to G.M.'s traditional committee system. This was an exclusive Pontiac project. Previous attempts for a 2-seater sports car (the Pontiac Banshee) go all the way back to John DeLorean, head of Pontiac in 1966. These were rejected by Corvette.



With a very limiting budget, Hulki used existing components from GM parts bin including suspension parts from the Chevrolet Chevette. The front wheel drive Chevrolet Citation suspension was moved to the rear to provide a mid-engine layout.

The car was designed from the driver's point of view and was the first production car to use a space/frame drivable chassis with a separate body shell composed of 4 different types of plastic body panels. This allowed an interesting degree of flexibility for a re-skin of a new design at a huge cost reduction. The car is basically a structural skeleton with an engine. Then the body goes on top.

Hulki kept the car out of normal GM development channels by moving the engineering work to ENTECH in Troy, Michigan. This allowed the P-car project to control costs and limit bureaucratic interference.

Hulki's unorthodox design methods and personal manner kept the project alive despite being cancelled 3 times by GM Corporate (defenders included Bob Dorn and Bill Hoglund).

The car was to be built in a completely refurbished plant in Pontiac, Michigan so the design could dictate the assembly process, not the reverse.

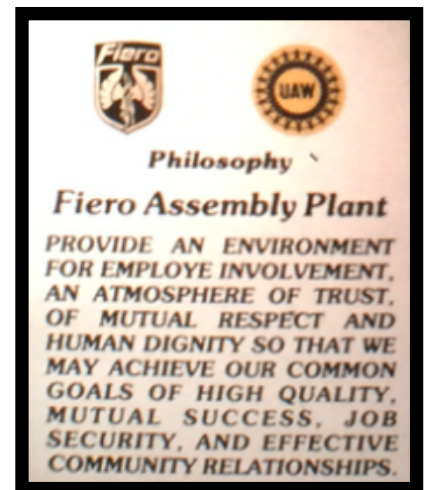
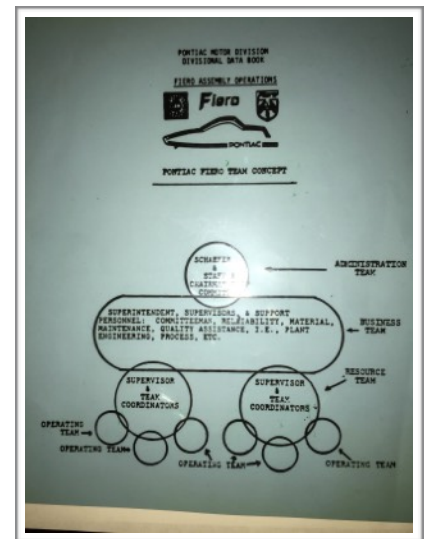
Ernie Schaefer was named the plant manager. He worked closely with Deming to adopt a new philosophy for the plant. There was no special parking or cafeteria for managers and no neckties.

The organization chart for the plant looked very different with all people assigned into overlapping teams.

Ernie scheduled his first 3-day Deming seminar with Deming and his staff in January of 1983. He held his second 3-day in June of 1984.

In addition to Deming's lectures, all assembly plant workers were given an extensive 5-day team-building training.

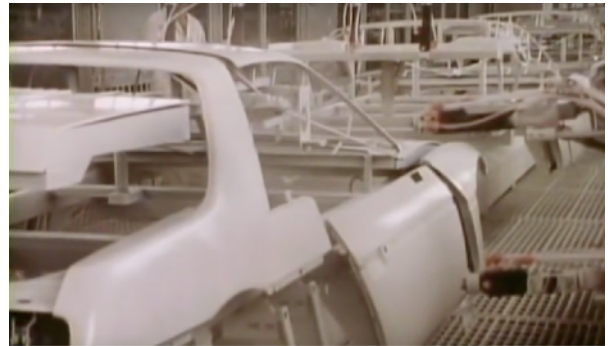
The word Fiero (which means "proud" in Italian) was named by a Fiero worker who called Bill Hoglund and suggested to change the name from "Sunfire."



Innovations at the Fiero Plant

Hulki came up with a unique “mill and drill” process to rigidly affix body mounts to the unitary structure, allowing the plastic panels to be attached with great precision.

The plastic panels were painted on racks away from the drivable chassis. They were attached near the end of the production line where they were less likely to be damaged. Every finished Fiero was road tested on public roads around Pontiac, Michigan.



Production of the 1984 Fiero began in July of 1983. Every Wednesday at 11am production was stopped and all workers met in their teams to discuss how they could make improvements for their work area. There was extensive use of quality tools (Pareto charts, control charts, fishbone charts) to aid in the improvements.

Many of the suppliers were selected very early and contributed in the design process. The relationship was based on trust and before contracts were given. Suppliers were not selected on lowest bid. Workers were encouraged to visit the supplier's site for any problems with their parts from that supplier.

A unique customer satisfaction survey was initiated by the workers. A random sample of 100 new Fiero owners were selected monthly and called by workers to share their experience with the car and any issues they had. The call started by “I built your car” and customers felt comfortable about talking about their new car.

The plant produced 136,840 Fieros for the 1984 model. A 2.8L V6 was added in 1985. A GT version with new body panels was introduced in 1986.



Beginning of the End

Roger Smith, CEO of GM, began a disastrous reorganization of GM in late 1984. He stripped the five car divisions of the former autonomy into two groups: CPC (Chevrolet, Pontiac, Canada) and BOC (Buick, Oldsmobile, Cadillac). The focus was on reducing costs and eliminating “redundancies.” This led to widespread layoffs, breakdown in internal communications, and loss of a great deal of accumulated knowledge and experience.

The Pontiac engineers were “merged” with Chevrolet engineers. Bob Dorn went to BOC and Cadillac. He was replaced by Jae Wetzel. Bill Hoglund was replaced by J. Michael Losh. Bill took his office chair with him—A Fiero seat. Ernie Schaefer was sent “fix” the Camaro/Firebird plant in California. He was replaced by Dennis Pawley.

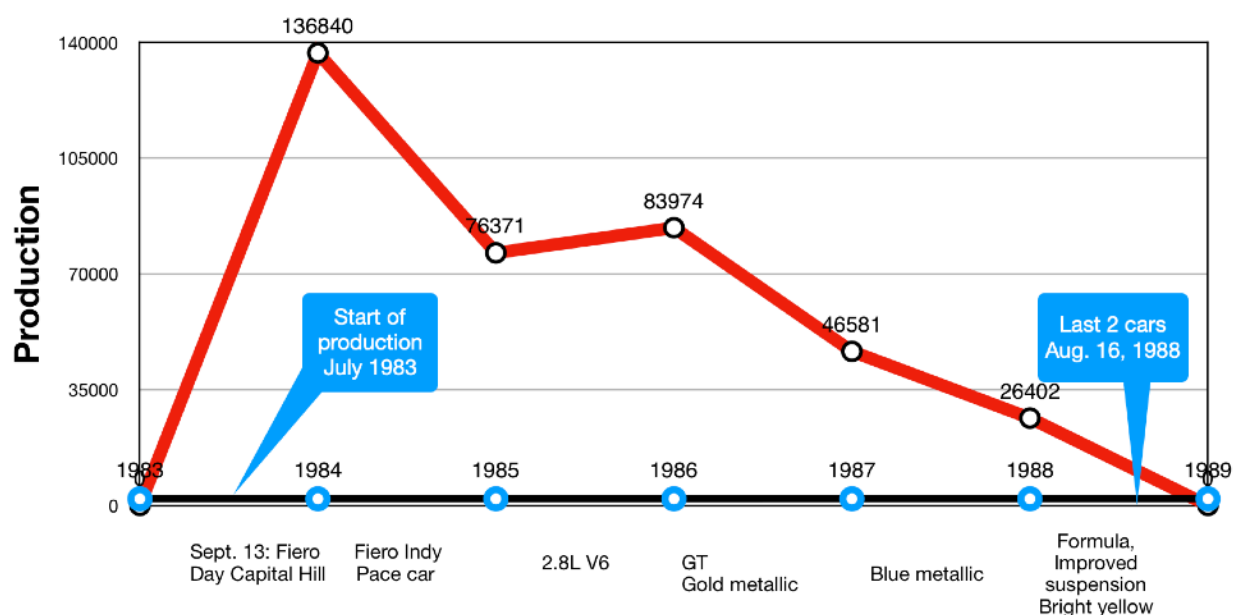
Thirty-million dollars was spent on the new suspension for the 1988 model. Even though the Fiero had not actually lost money, GM projected losses because they expected the sports car market to shrink dramatically in the early nineties. (Mazda introduced the 2-seater Miata in 1989 and is still being manufactured today!)

The UAW lobbied to save the Fiero, hoping to preserve their unique production system. Losh told the union he would think it over, but it was already too late. On March 1, 1988, Pontiac announced that the Fiero would be discontinued at the end of the 1988 model year.

The end of Fiero came on August 16, 1988. There were layoffs for all 1109 Fiero team members (1241 had already been on indefinite layoffs). The last two Fieros were raffled off for the workers at the plant. Mike Kelley received the last production Fiero.



370,168 Mid-engined Fiero's produced 1983-1988



In all, 370,381 Fieros were produced in Pontiac. They averaged 47 man-hrs per car (direct and indirect labor). Corvette was 85 man-hrs per car. Warranty costs went down each year. Fiero was first in the internal GM corporate audits out of 26 assembly plants two years in a row.

The UAW at Fiero produced a videotape “The Fiero Years” capturing the joys and sadness of more than 2000 workers that built the Fiero. Their closing message was:

from our hearts

...from our hands

...into history

