Putting Porsche in the Pink

By NATHANIEL C. NASH

Not too long ago, the production floor of Porsche's factory was not a pretty sight. Workers would storm off in a huff. Managers would fume. Voices would rise above the hum and bang of the line.

And Japanese engineers -- mostly Toyota alumni -- would wave their fingers, demand explanations, scold, lecture and browbeat, essentially telling some of Germany's finest automobile craftsmen how poorly they were doing their jobs.

Had the pride of German auto makers bowed under the dominance of the efficient Japanese? Sort of. What was in process was the salvation of Porsche A. G., Germany's ultimate symbol of racing car performance and autobahn freedom.

From the dizzying heights of the mid-1980's when American yuppies, not to mention staid German executives, had to have one, Porsche went to the brink of bankruptcy in 1992. Recession had crippled sales, and costs were out of control. Turning to the Japanese, with their "lean" manufacturing techniques, was considered its only hope of making a profitable car and avoiding the ever-rumored takeover by BMW, Mercedes-Benz or Volkswagen.

"It was the biggest shock for the company to accept that Japanese were walking around, not able to speak either the Schwabian dialect or German, and telling people what to do," said Wendelin Wiedeking, Porsche's 43-year-old chief executive. "They were tough guys. They were absolutely aggressive to the people. And we wanted it that way."

The remaking of Porsche using Japanese manufacturing techniques has a significance beyond the company. For years, German auto makers, feeling the pinch of more efficient Japanese producers, have tried to adopt elements of just-in-time lean manufacturing and to get high-paid German workers to be more flexible. But changes have been modest at best, leading many auto executives to vow they will never open a new car plant in Germany again.

"Germany looked at Japan and said, 'Yes, but we can't do it here; we won't do it here,' " said Daniel T. Jones, a professor at the Cardiff Business School in Wales. "Porsche had no choice. And having done it, the argument that other auto makers ought to be following their lead becomes irresistible."

Feelings may have been hurt, but Porsche survived -- not only as a cachet name in German automobiles, but as the last remaining independent European manufacturer of sports cars. The company recently reported its first profit in four years, after $300 million in losses.

"That profit guaranteed our independence," said Michael Macht, head of Porsche Consulting, which the car maker formed to spread the Japanese manufacturing concepts it learned. "This is not a turnaround. It is a new company."

Today peace prevails on the Porsche line. The production changes imposed by the Shin-Gijutsu group, the cadre of former Toyota engineers to whom Porsche turned for advice three years ago, mean that more cars are produced faster by fewer people without losing technical sophistication and road performance.

And having put the losses behind it, the company can concentrate on developing new models and new markets. Porsche already has orders for 10,000 units of its new roadster, the Boxster, which it plans to introduce later this year as its least-expensive model. In 1997 it will roll out a new version of the famed 911. And the company is in discussions with other auto makers about possibly producing a high-performance off-road vehicle, a minivan and a small low-priced sports car.

The team of Japanese consultants now returns only about four times a year -- "to scold us," Mr. Macht said. But the innovations the Japanese initiated are being continued by the German engineers. Workers on the line submit 2,500 suggestions a month.

The factory is clean and quiet, its huge six-cylinder motors built with remarkable efficiency. Nobody stands around. No half-built engines sit to the side of the assembly line. And there are no bins of spare parts through which workers have to dig. The parts needed for assembly hang on carts that are pulled down the line with the engines, so that workers do not have to leave their work space.

Porsche management says the efficiency improvements are measured in more than just the company's return to profitability. It has reduced the assembly time for one of its speedsters from 120 hours to 72. The number of errors per car has fallen 50 percent, to an average of three. The work force has shrunk 19 percent, to about 6,800 employees from more than 8,400 in 1992. The line itself has been shortened and inventories have been cut back so much that factory space has been reduced by 30 percent. All this means Porsche is making more cars at lower cost.
Much of the credit for the remaking of Porsche is given to Mr. Wiedeking, a self-confident, direct hands-on manager who started as an engineer at Porsche in the 1980's and then left to run an automobile parts maker.

The company's family owners spent much of the 1980's warring with their appointed chief executives, eventually dismissing several. The family was often in the news and in gossip columns over their personal lives.

But no matter. The boom times early in the decade fueled sales, which soared to more than 50,000 a year.

Then the recession of the early 1990's hit. Porsche sales plummeted to 14,000 units in 1993, including a paltry 3,000 in the United States, its largest market. The family paused in its feuding to call in Mr. Wiedeking for help.

From the beginning, he says, his idea was to bring in the Japanese. First, he eliminated one-third of his managers and gave those remaining new assignments, so they would be struggling to learn new jobs -- "rather than waiting for me to make a mistake."

Next he took his management team on extensive tours of Japanese auto plants. They timed precisely how long it took Porsche to assemble body parts and engines and install carpeting and dashboards, then studied the comparable times in Japan. On most tasks, Porsche was taking almost twice as long.

"On those trips a lot of people said, 'I did 20 years of work and it's all garbage now.' " Mr. Wiedeking said. "It gave us an understanding of what had to be done."

The arrival of the Japanese in late 1992 was indeed painful. One of the engineers, Chihiro Nakao, says they were always polite to the workers but often sharp with the managers.

Porsche's assembly line, he says, looked like a dark warehouse when the Japanese arrived. On either side were shelves eight feet high with huge parts bins filled with 28 days of inventory. To get a part, workers often had to climb ladders, wasting enormous amounts of time.

First off, the shelves were cut in half and inventory reduced to seven days. Eventually the parts bins were eliminated entirely. Porsche engineers created a remarkably low-tech, but highly efficient parts supermarket in the basement of the factory. There, workers hook only the parts needed for each stage of assembly onto carts. The carts are then sent up to the line and accompany the car until they are used up, when they return to the basement to be refilled.

"Even the Japanese are interested in this system," Mr. Wiedeking said.

What is ultimately revolutionary for Porsche's auto makers is the redefinition of craftsmanship.

"The traditional craftsmanship for which Germany became famous was filing and fitting parts so that they fit perfectly," Professor Jones said. "But that was wasted time. The parts should have been made right the first time. So the new craftsmanship is the craftsmanship of thinking up clever ways of making things simpler and easier to assemble. It is the craft of creating an uninterrupted flow of manufacturing."

The company now has been able to turn its focus to product development. The 2-seat Boxster -- a roadster with Porsche's traditional flat, six-cylinder with opposing, or boxing, cylinders -- will cost about $50,000, compared with about $64,500 for a 911 coupe. Porsche hopes the Boxster will add younger professionals to its customer base of wealthy professionals and business people over 40.

Porsche still hopes to strip another 10 hours off car-assembly time, according to Mr. Wiedeking, a goal that would make the company comparable to the best Japanese auto makers. And Porsche is working with its suppliers to cut costs and improve quality and deliveries.

But the Boxster will be the true test of Porsche's campaign of self-renewal. BMW, Mercedes-Benz, Audi, Fiat and Rover have all introduced new two-seaters in recent months, or plan to soon.

"It is entering a very crowded market segment," said Steven Reitman, auto analyst for Union Bank of Switzerland in London. "The whole roadster market will be very crowded by the time Boxster hits the scene."

Mr. Wiedeking says simply: "For the others, a sports car is a marketing strategy. For us, a sports car is our life. If the customer feels he wants the real one, wait for the best."