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Bob Williamson, Contributing Editor ***While the U.S. automotive industry is enduring one of the most challenging eras in its history, foreign nameplate auto manufacturers in the U.S. appear to be flourishing. This reminds me of a similar situation: the rise and decline of the British automotive industry.***

In the years following World War II (the very early ‘50s), the British automotive industry was the second largest in the world, and the largest exporter of automobiles and commercial vehicles. It exported more than the U.S. and was second only to the U.S. in auto manufacturing output. In fact, it out-produced any other country in Europe and any other industrialized country, save the U.S. Yet, by the late 1960s, it had embarked upon a precipitous decline, followed by "nationalization" in 1975.

In 2005, the last of the BIG British-owned auto plants, MG Rover, closed its doors, idling some 6,000 auto workers and severely undercutting another 20,000 supplier employees in the midlands of England. This sad event was punctuated with union leaders blaming mismanagement and the lack of government support—*nevertheless, the doors still closed*.

My lifelong fascination with British motorcars (especially the MG) sparked my interest in another story that made the news on March 28, 2007: The *"First MGs Roll off Nanjing Automobile's Production Lines."* Nanjing? As in China? Yes, China, the second largest, fastest growing automobile market in the world according to some sources…

Founded in 1947, Nanjing Automobile Group (NAG) is the oldest auto manufacturer in China. Today, it has 16,000 employees making cars, trucks and buses. The company clearly has big

plans for its new acquisition, as evidenced by the fact that it produced its first MGs less than two years after purchasing the Brits' ailing MG Rover firm and moving it to China!

NAG's production goals include 200,000 MG cars plus engines and gearboxes in the *High-Level New Technology Economic Development Zone* located in a new $452 million manufacturing facility. The company has begun producing three models, among them the "MG-TF" reminiscent (by name only) of my own restored 1954 MGTF. While the original "MG" stood for "Morris Garage," the new Chinese version stands for "Modern Gentleman," which is meant to appeal to China's rapidly emerging elite class. What's even more interesting—*especially for those of us in this country*—concerns some other changes in the works. Apparently, NAG is planning to open an assembly plant in Ardmore, OK, USA.

Tough numbers Since the late ‘60s, in light of many historical labor, management and capitalization challenges, British auto-industry labor productivity had shrunk to only one-fourth that of the U.S. auto industry. Then, the reorganizing, nationalizing and dismantling began. *Ford* bought Aston Martin (recently sold), Daimler, Lanchester, Rover, Jaguar, Land Rover and Vanden Plas. BMW bought Riley, Standard, Dawson, Triumph, Autovia, MG Rover and Mini. Nanjing then bought Wolseley, Austin, Morris, Vanden Plas, MG Rover, American Austin, Princess and Sterling. What a list! Many of these names represent very strong brands, some them dating back to the late 1800s and early 1900s.

Speaking of past strength, for years, the MG Rover Longbridge plant was one of the most important factories in Europe, as well as one of the largest British-owned auto plants, employing over 22,000 workers in the mid ‘70s. In 1995, however, only 16,000 worked at the Longbridge plant. Ten years later, plant rolls had fallen to 6,000. Bankruptcy finally claimed MG Rover on April 7, 2005—*just two years before NAG began rolling out MGs.* Not too much left of the traditional British auto industry today…

Improving numbers

These days, a *largely renewed* British automobile industry is producing huge volumes of quality cars and trucks. In 2005, over 1.5 million cars and 200,000 commercial vehicles were produced with export sales of 74% and 63%, respectively. The Top Five auto makers in England today include: *Nissan* (The "Most productive car plant" in Europe for seven years running), *Toyota, BMW (Mini), GM-UK and Honda.*

- GM and Ford are numbers one and two in commercial vehicle production.
- Ford (including Land Rover) is the largest engine producer in the UK, more than double that of number two, Toyota.
- Ford manufactures the largest number of cars and trucks sold in England ahead of Vauxhall (a GM company).

All of this proves that the auto workers in the UK today are *capable of performing and producing* at world-class levels, despite the decline and destruction of their traditional auto industry. We've been noticing similar trends on this side of the pond, too, for more than a decade.

I've seen it for myself, during a visit to the BMW plant in South Carolina, where two separate production lines (the BMW X-5 Sport Activity Vehicle [SAV] and the BMW Z4 sports car) recently were combined into a single line. In less than six weeks (over the Christmas/New Years break), the company literally gutted over a million square feet of this 11-year-old manufacturing facility and re-fitted an entirely new "single-line" process. Over the next 12 weeks, it ramped up to its current rate of 650 vehicles per day.

BMW undertook this radical modification to optimize production of the increasingly popular X5 SAV and adapt to changing seasonal demands for its Z4 model. Accordingly, I saw three to four X5s coming down the assembly line for every Z4. Almost every vehicle was different, too—*differ ent colors, wheels, interior and exterior trims, diesel or gas, basic or high-performance, domestic or export, left- or right-hand drive, coupe or convertible, etc.*
The combined line reflects an astonishing engineering and construction feat, as well as a significant logistical and workforce training success. This BMW plant is living proof that the U.S. workforce and leadership can do anything they put their minds to…certainly making us the most productive nation in the world. Refer to the following points to see how it works.

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U.S. productivity… Auto plant productivity is measured in a variety of ways across three

operations: stamping, power-train and assembly. Let's look at "hours per vehicle," which includes ALL employees in the facility being measured—*hourly, salary, direct and indirect.*

In 2006 Nissan's overall productivity per vehicle led the North American industry at 28.46 total labor hours/vehicle (HPV). Toyota's was 29.40 HPV; Honda's was 32.51; Chrysler Group's was 33.71; GM's was 33.19; and Ford's overall productivity was 35.82 HPV. These types of statistics tell us that our auto industry can be competitive. Unfortunately, the cultures of some of our more traditional U.S. auto manufacturers significantly reduce their competitive edge.

Status quo, complacency and ignorance can kill a once thriving business. We can, and we should learn from history to avoid common pitfalls that have hurt businesses and their workforces.

The most productive U.S. auto assembly plant (not including power-train and stamping) was Ford's Atlanta operation, which turned out the Taurus and Mercury Sable (15.37 hours per vehicle). Ford, though, recently announced the closing of this plant. The second most productive plant was *GM's Oshawa #2* (16.08 hours per vehicle). But, like Ford, GM has announced plans to close this plant. The lesson here is that while "productivity" is essential, business success involves much MORE.

Additional factors pertaining to sustainable competitiveness include product sales volumes, operating costs, labor cost/hour, profit margins/ vehicle, production flexibility, future growth potential, labor relations, flexible work practices and distance from suppliers. Consider, too, the issues of "capacity utilization" and "profitability."

Capacity utilization…
In 2005, in their North American operations, Toyota, Nissan and Chrysler were near full capacity (94%-100%), while Ford plants were only producing at 79% capacity.

Profitability…
Likewise, in 2005, Nissan, Toyota and Honda earned more that $1,200 pre-tax profit on every

vehicle sold in North America, while Chrysler Group earned only $223. During the same period, though, *Ford lost $590 and GM lost $2,496*.

The rise and decline of the British automotive industry and the woes of the "Big Three" U.S. auto makers should provide some "lessons learned" for ALL U.S. manufacturers:

- **Market forces**—Paying attention to customers and markets is as important as paying attention to the competition.
- **Business strategy**—Manufacturing competitiveness demands that from time to time we fundamentally re-think how we perform work. (Design, build, work methods, marketing, sales, etc.)
- **Measures of success**—Productivity, efficiency and quality are important, but are only part of a complex formula for business success. (Sales Revenue – Cost = Profit)

- **Hidden capacity**—Capital asset utilization, or tapping the "hidden capacity" in a plant's critical processes, must be a high priority. (Focus: Overall Equipment Effectiveness, MTBF, MTTR)
- **Equipment reliability**—Poorly maintained, unreliable equipment can undermine almost all improvement initiatives in a capital-intensive business. (Higher costs, delayed shipments, interrupted flow, etc.)
- **Labor & management**—Labor/management communications across and throughout the organization must be open, honest, continuous, and focused on business success, not individual or organizational agendas. ("We're going to win or lose together.")

- **Work methods**—Restrictive work practices, outdated work rules and past practice can stifle creativity and innovation and lead to signifi- cant and irreversible losses. ("If you always do what you've always done, then you'll always get what you've always got.")

- Standardized work—Consistent work procedures provide the basis for training and qualifying the workforce and drive out human variation shift-to-shift and crew-tocrew. (Drives out variation, improves efficiency, reduces errors, lowers cost, etc.)

Better numbers ahead

Historically, the auto industry has set the stage for manufacturing strategies across many other non-auto businesses. History repeats itself and history often tells us why things are the way they are today. Status quo, complacency and ignorance can kill a once thriving business. We can, and we should learn from history to avoid common pitfalls that have hurt businesses and their workforces. Successful businesses and workforces help communities and nations thrive. Let's do our part in our businesses, plants, departments and crews to remain competitive and prosperous.

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