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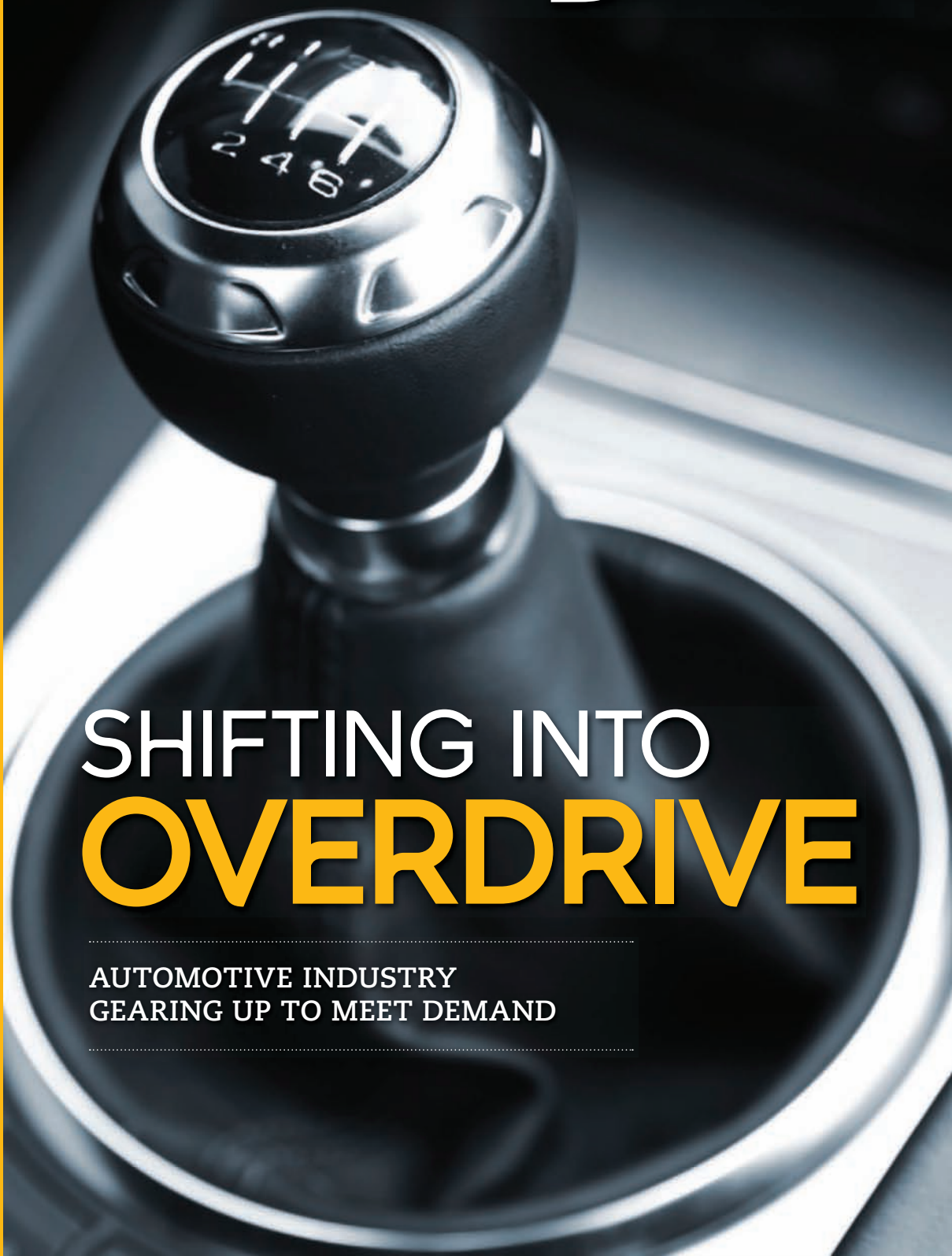


SHIFTING INTO OVERDRIVE

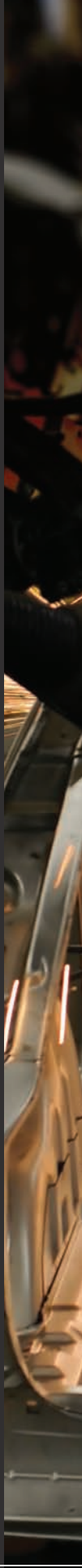
AUTOMOTIVE INDUSTRY GEARING UP TO MEET DEMAND

THIS ISSUE / Shifting Into Overdrive

Stephen Gray
Chief Executive Officer

In this issue of the *GrayWay*, we're going to check in on the automotive industry in the United States, which has been a big part of our history at Gray. In 1972, my father sold one of Gray's first design-build projects for the automotive industry–Eaton Axle in Glasgow, Ky. Since then, our success has been closely tied to the fortunes of the automotive industry, and that's why we spend a lot of energy trying to understand what forces are driving the changes here.

Also, we have some interesting commentary from industry leaders on how the industry is responding to the increased automotive demand, where the efficiencies are, and what the new CAFE standards mean for the future of automotive manufacturing.



SHIFTING INTO OVERDRIVE

AUTOMOTIVE INDUSTRY GEARING UP TO MEET DEMAND

CONTENTS

COMING BACK STRONG

U.S. AUTOMOTIVE INDUSTRY REDEFINING ITSELF, SHOWING IMPRESSIVE GAINS

Long before the U.S. economy slipped into recession in 2008, the once-dominant "Detroit Three (D3)"—Ford, Chrysler, and GM—were losing market share at a rapid pace. In the 1980s, competition from international and other automakers just entering the U.S. market drastically changed the business of selling cars here, but the D3 never quite adapted to this new business environment.

The "Great Recession" proved too much for the D3, sending Chrysler and GM into bankruptcy, with Ford not far behind.

How bad did it get? According to the global market information and analytics leader IHS, over 17 million light vehicles were produced in North America in 2000. Of this, 76 percent were produced by the D3, with the remaining 24 percent produced by international and other domestic automakers.

By the end of the recession in 2009, total light vehicle production dropped by over 8.5 million units, with the D3 making just 55 percent of these vehicles. While the majority of U.S.-based manufacturers experienced significant production declines, international automakers were now accounting for a much larger piece of the pie.

Fast forward to 2013: U.S. automotive sales are on the rebound, and the D3 are healthier than they have been in a very long time. The industry as a whole is on pace to produce over 16 million light vehicles by the end of this year, and the D3 are maintaining their share of this production at 55 percent.

International automakers with U.S. manufacturing operations—BMW, Hyundai, Nissan, Toyota, Volkswagen, among others—took measures to lessen the impact of the recession, like cutting overtime and holding periodic plant shutdowns, leaving them virtually unscathed at the recession's end.

While the D3 are no doubt healthier, IHS projections show a steady decline in their percentage of light vehicle production share through 2020.

Michael Robinet

Michael Robinet, managing director of automotive for IHS, has a deep understanding of the ebbs and flows of the automotive market, having developed global vehicle production forecasts for IHS for 15 of his 25 years with the group. This forecast is used by 85-to-90 percent of the world's vehicle suppliers to make decisions about production planning and capital investments. According to Robinet, international automakers are increasingly shifting production of once-imported vehicles to the U.S., which would account for the D3's overall percentage decrease in production rates here. And, because foreign-based manufacturers are largely hubbed in markets outside the U.S., they were not as adversely impacted by the U.S. economic downturn.

While the government bailout helped the D3 pay off a large percentage of their debt and invest in technology and equipment, he attributes their newfound success to a complete mindset change.

"You had vehicle manufacturers that were burdened with higher labor costs," explained Robinet. "They had high fixed and high capital costs. They were spending too much to develop their vehicles because they couldn't spread those development costs on a global perspective—they could only spread them from a regional perspective. So the economics were backwards, but also the structure needed to be updated to the 21st century."

Robinet contends that "to move the metal," the D3 began driving vehicle prices down with incentives rather than finding ways to cut production costs.

"The fact is that we need to take 25-to-30 percent of the mass out of our vehicles by 2025 or so, and a lot of heavy lifting has to occur between now and then."

– Michael Robinet

So when the economy tanked and there was less consumer purchasing power, incentives did not move cars off lots the way they once did, forcing these automakers to make critical changes to the way they do business.

"Basically, they had to start from the bottom and really work their way through and ask, 'what do we really need to do to make this company better, faster, less costly, and more flexible,'" said Robinet.

Today, Robinet says the D3 are much more disciplined about their pricing structures, only adding incentives when absolutely necessary. And now that the emphasis is off incentive programs, it has freed them to focus on product innovation and improving plant efficiencies, bringing them closer to par with their international counterparts.

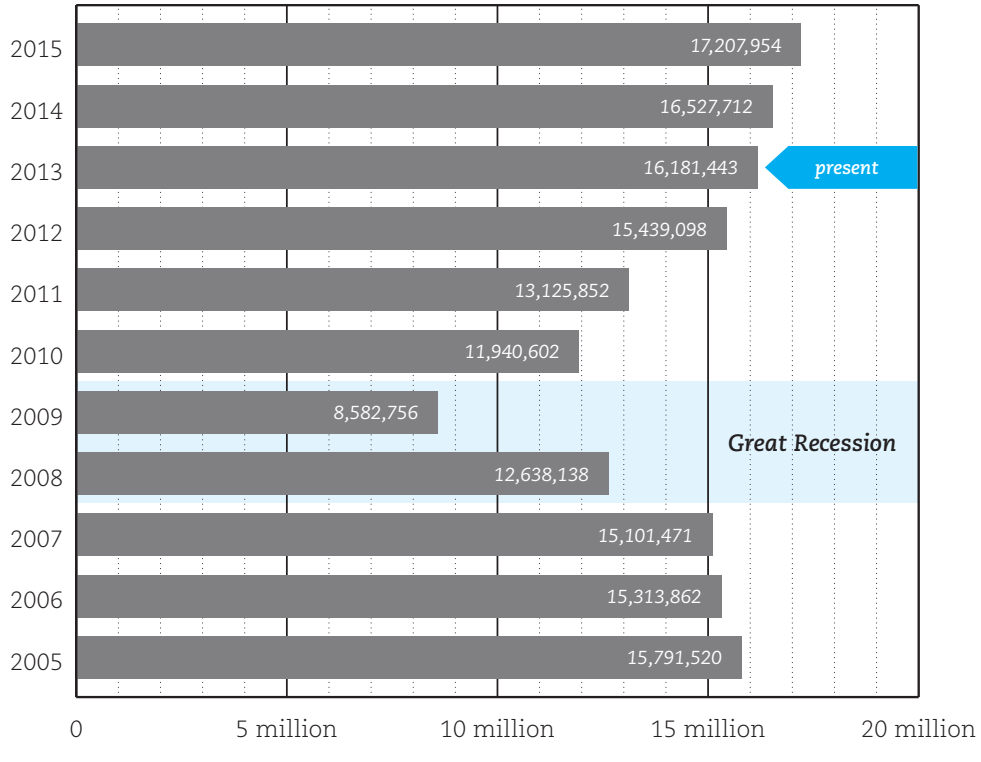
Historically, Robinet says an average workweek for a U.S. automotive plant was around 80 hours, but today's U.S. automakers—both domestic and international alike—have some plants producing vehicles up to 130 hours each week.

"If you think about capacity on a two-shift basis, that means that you're basically using your plant at 150 percent capacity… that's not something just nice to have… that's a mindset change. And then, if the demand goes down, you just ratchet it back."

While a U.S. automotive resurgence is undeniable, new challenges lie ahead for both domestic and international manufacturers, mostly notably new, stricter regulations from the Environmental Protection Agency (EPA) to curb vehicle emissions.

"The fact is that we need to take 25-to-30 percent of the mass out of our vehicles by 2025 or so, and a lot of heavy lifting has to occur between now and then," explained Robinet. "It's more than changing from steel fenders to aluminum fenders. It goes a lot deeper than that. It's changing the manufacturing philosophy, it's changing the supply base, it's changing the way you develop vehicles."

North American Light Vehicle Production
from 2005–2015 (projected)



Total Vehicles Produced

Source: IHS Automotive

THE LEAN MACHINE

U.S. AUTOMOTIVE SUPPLIERS DOING MORE WITH LESS

No matter what anyone says, good things can come from a bad economy. No one understands that better than the folks leading America's automotive companies—from the domestic and international assembly plants, to the scores of companies that supply them. A three-year recession forced this industry to become smarter, leaner and more productive. And with demand for new cars and trucks soaring once again, for suppliers, the new challenge isn't staying afloat, but keeping up with demand.

Bernard Swiecki

Bernard Swiecki is assistant director of the Automotive Communities Partnership at the Center for Automotive Research (CAR) and manages CAR's analysis of vehicle sales, production, and segmentation data, in addition to authoring a monthly column on the automotive industry. He says that, in response to the U.S. economic downturn, some 2 million units worth of parts were taken out of the automotive supply chain to decrease volumes. Some suppliers were forced to shut down plants, while others reduced headcount and invested less in new equipment to keep the doors open.

Now that new life has been breathed into the U.S. automotive industry, suppliers are once again bustling with activity, with some just under or approaching full capacity. Even with clear signs that the economic recovery is here to stay, Swiecki says suppliers are reluctant to make new capital investments until it is absolutely necessary.

"So, what they've been doing is either adding shifts or finding ways to increase efficiency of their manufacturing operations by increasing productivity and working overtime," began Swiecki. "Or, when they have a contract for which they specifically need new tooling or new space, that is when they will add (capacity), and they will only add enough to cover that contract. There isn't a buffer that's being built into the equation."

Eaton, one of the largest suppliers to the global automotive industry, is one company feeling the pressure to keep up with the increased demand for parts, but is energized to take on this new challenge.

Staci Kroon, president of Eaton's North American Automotive division, is a 17-year veteran of the automotive parts industry and says while recovering volumes are indeed causing automotive suppliers some strain, another challenge is reacting to the much quicker rate at which customers are launching new vehicles.

Staci Kroon

"Even though the capacity to make a product is there, you still have to make modifications to make the new product," said Kroon. "Just because you can make a given component doesn't mean it's the right component for the launches that are happening. So that level of activity is not just around units produced, but it's around the complexity that's created in the manufacturing environment when you have all these new launches going on, and the products are more advanced than they have been in the past."

To deal with this "good" problem, Kroon says Eaton is finding ways to utilize equipment differently than they had in the past, running production lines six-to-seven days a week. She says the company has also added staff and new production lines, and has increased overtime.

Rotors for Eaton's supercharger product line are manufactured at the company's Athens, Ga. plant.

This year, Eaton has filled nearly 40 new roles and has several salaried positions in engineering, technology, program management, and finance still open.

Despite the challenges automotive suppliers are facing today, Kroon believes the industry is well-positioned to thrive in what has become the "new normal" business of automotive manufacturing.

"It's not like this has been sneaking up on us," Kroon said. "We're all very aware, and we're having a lot of conversations around it. I think that sets us up for success better than if it came as a big surprise, like it did in '08 and '09. We weren't ready for that downturn. We're ready. We're preparing for the volume increase."

Budget Priorities for North American Automotive Suppliers

Actions for Meeting Expected 2014 Volume Increases

*Measured by percent of respondents

Priority Rating

highest priority — *lowest priority*

OESA Deloitte.

Source: OESA Automotive Supplier Barometer – July 2013
Published in partnership with Deloitte LLP

Breaking It Down

How the Corporate Average Fuel Economy Bill is Forcing a Revolution in Design of U.S.-Produced Vehicles

It is no secret that the strict regulatory environment in the U.S. complicates the business of manufacturing here, and the automotive industry is no exception. One of the most significant regulations impacting automakers and their suppliers today is the Corporate Average Fuel Economy bill—better known as CAFE. This bill requires vehicle manufacturers to comply with the gas mileage or fuel economy standards set by the U.S. Department of Transportation (DOT).

Dave Andrea

Dave Andrea is senior vice president, industry analysis and economics for the Original Equipment Suppliers Association (OESA), a trade association that addresses issues of common concern that impact the component supplier industry. For over 25 years, Andrea has spent countless hours analyzing the automotive industry from a variety of perspectives. He says that, to comply with CAFE requirements, U.S. automakers are working diligently to increase vehicle fuel economy by an astounding 50 percent by the year 2025.

"This is driving a revolution in light-weighting our vehicles," explained Andrea. "The automobile has been predominantly steel in the past, but we'll be seeing more dissimilar materials incorporated into vehicles. Steel will still remain dominant, but you'll have aluminum and magnesium and increasing plastics—even carbon fibers and some more exotic materials. But, the industry is trying to drive these down to mass production prices."

Andrea says that what is complicating this task even further is the introduction of new, sophisticated engine features—driven by consumer demand—that are adding content to the vehicle and, therefore, weight.

"We're seeing six- and seven-speed automatic transmissions, and now, they're commercializing eight- and nine-speeds, so the amount of software and content that is in the power trains will leapfrog dramatically over the next ten years," he said.

And if meeting CAFE regulations weren't enough, U.S. automakers are being required to comply with more strict international standards, particularly in Europe and the Asia-Pacific region.

"So, there's pressure on U.S. vehicle manufacturers to globalize their vehicle and engine platforms worldwide to get to scale, and they have to be able to meet both worldwide regulations, as well as consumer demand," said Andrea.

Andrea says U.S. automakers are working closely with their supply base to meet these requirements, while controlling costs.

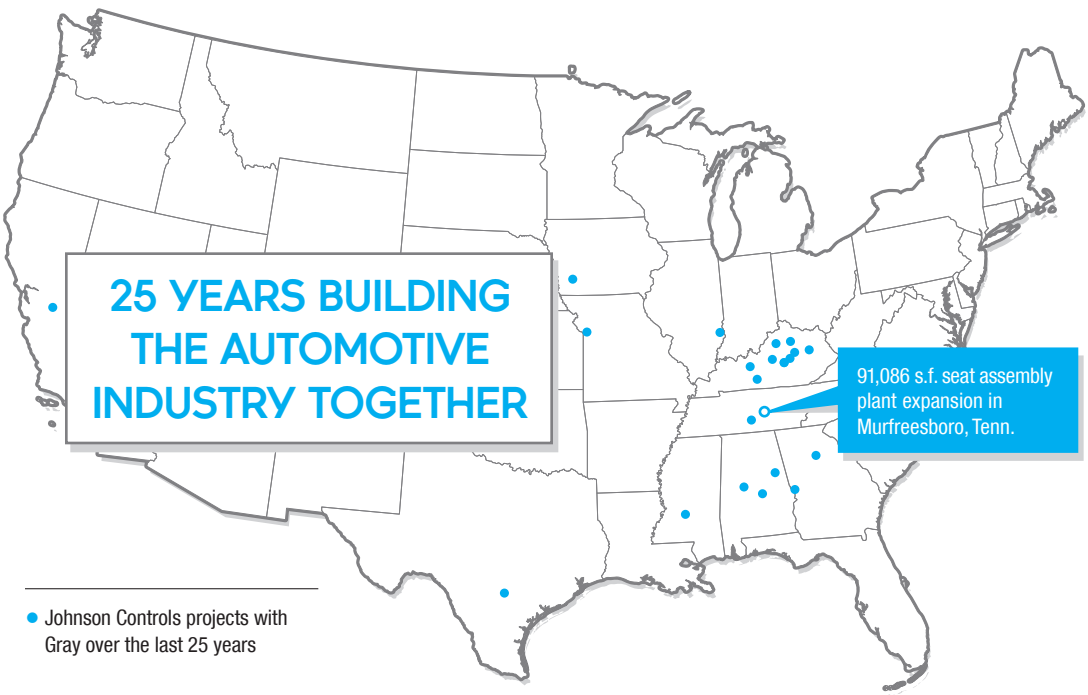
"Increasingly, what the suppliers are spending dollars on are more flexible machining lines and production lines so that they can keep the same base equipment but be able to swap out the controls, the dies, the molds, and to be able to produce many different parts on the same line," he said.

To learn more about CAFE or other regulations impacting the U.S. automotive industry, visit the website of OESA's parent organization, the Motor and Equipment Manufacturers Association (MEMA), at www.mema.org/Main-Menu/Legislation.

GRAY... WE'RE BUILDING

JOHNSON CONTROLS SEAT ASSEMBLY PLANT EXPANSION

Murfreesboro, Tenn.



Continuing a 25-year relationship with Johnson Controls (JCI), Gray was selected to design and build a 91,086 s.f. expansion to an existing "just-in-time" (JIT) seat assembly plant in Murfreesboro, Tenn. This plant supplies the Nissan final assembly plant in nearby Smyrna, Tenn.

In June, Nissan announced it is moving manufacturing operations for its compact crossover SUV, the Nissan Rogue, to Smyrna from Kyushu, Japan, creating some 900 new jobs for the area. As a key supplier to Nissan, JCI is expanding its Murfreesboro plant, adding capacity for the production of Nissan Rogue seats.

Construction began in January 2013 and will be completed in two phases by this November. Gray is providing architecture, engineering, and construction management services. Since 1988, Gray has completed some 59 automotive projects for Johnson Controls in ten states, including new construction and expansions of existing facilities.

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