

AUTOMOTIVE, TRUCK
AND HEAVY EQUIPMENT

2008



NORTH CAROLINA
THE STATE OF MINDS



OUR VALUE PROPOSITION

North Carolina is committed to growing the automotive, truck and heavy equipment industry within the state. In addition to the headquarters of two leading truck manufacturers, there is an extensive network of automotive suppliers within the state and one day's access to eighty percent of American and Canadian automotive plants. When you combine the leading motorsports economy in the country, investments in advanced automotive research facilities, world renowned universities and community colleges and a skilled and productive workforce, North Carolina is a place where these companies can prosper.

WE ARE AN ESTABLISHED, INNOVATIVE AND GROWING CENTER FOR AUTOMOTIVE, TRUCK AND HEAVY EQUIPMENT COMPANIES

- More than 160 companies in the motor vehicle parts industry in North Carolina, employing more than 17,000 people – between 1992 and 2007 employment growth was 4.5% compared to -11.9% nationwide
- North Carolina ranks 10th among all states in total automotive cluster employment according to the Harvard Business School Cluster Mapping Project
- 34 of the top 150 North American OEM parts suppliers have facilities in North Carolina and 19 of those have more than one facility in the state
- Strengths within North Carolina's cluster include:
 - Home to several leading truck manufacturers including Daimler, Mack and Volvo Trucks
 - Home to the headquarters of two leading bus manufacturers – Daimler and Thomas Built Buses
 - Home to leading heavy equipment manufacturers including Caterpillar and John Deere
 - Home to leading racing and motorsports teams including 82% of Sprint Cup Teams, 72% of Nationwide Series Teams and 55% of Craftsman Truck Series teams

WE HAVE THE RESOURCES AND INFRASTRUCTURE TO SUPPORT FUTURE GROWTH

- North Carolina is at the forefront of technologies and research to make motor vehicles better for the environment:
 - **Alternative Fuel and Vehicle Incentive Program** – designed to promote the use of alternative fuel with the ultimate goal to reduce US dependency on foreign oil and improve air quality
 - **Plug-in Technology Initiative** - plans to develop batteries that are less expensive, lighter, more efficient and can be charged from conventional home plugs, with a long-term goal of creating a battery to serve as a gasoline replacement – research based at North Carolina State University
- North Carolina is home to numerous private research facilities that offer services to the automotive industry:
 - **AeroDyn Wind Tunnel** – provides thorough, accurate, and convenient full-scale wind tunnel testing designed specifically for race cars
 - **Honda R&D Americas, Honda Aircraft** – provides product engineering, prototype development, and testing and is involved in the continuous development of first-class power equipment products
 - **Lotus Engineering R&D** – provides a range of services to many of the world's car manufacturers and automotive suppliers, from initial concept, project design through development, to full production prototypes
 - **NASCAR Technical Institute** – provides skills needed to become a NASCAR technician with core programs pertaining to the basic skills and knowledge required to diagnose and repair mechanical and electrical malfunctions
 - **Toyota Racing Development** – consists of a 35,000 square foot facility housing the company's NASCAR competition group and chassis engineering operations
 - **Windshear, Inc.** – houses the most advanced publically available windtunnel in the world in a 40,000 square foot scale, rolling road facility

WE HAVE COMPREHENSIVE EDUCATION AND TRAINING PROGRAMS

- Several universities have program specialties and research initiatives that include:
 - Advanced Automotive Materials and Manufacturing
 - Advanced Powertrains and Vehicle Performance
 - Intelligent Vehicle and Infrastructure Design
 - Mechanical Engineering
 - Vehicle Design and Integration
- **NC Motorsports and Automotive Research Center (ncMARK)** supports the motorsports and automotive industries through education emphasizing experiential learning, research, and community involvement
- **Motorsports Management Program** is the first four-year degree program in the US to focus on the business and management aspects of motorsports
- More than 75 percent of the campuses in North Carolina's Community College System have automotive-related training programs, with programs such as:
 - Automotive Systems Technology
 - Automotive Management
 - Motorsports Technology and Management
- **Carolina Electronic Vehicle Coalition** – sponsors the EV Challenge where high school students convert a gasoline vehicle to electric power and use it in an education program
- **Model Solar Fuel Cell Cars** – provides middle school students with a hands-on opportunity to learn about transportation challenges through the North Carolina Solar Center

WE OFFER A HIGHLY SKILLED AND MOTIVATED WORKFORCE

- North Carolina has a strong manufacturing background with more than 500,000 manufacturing workers throughout the state – ranking ninth nationally in total manufacturing employment and first in the southeastern US
- The average worker in North Carolina is about 10 percent more productive than the national worker
- There are many workers with skills used in the textile and furniture industries – areas of strength in North Carolina with compatible skills that could easily transfer to key automotive assembly occupations, including:
 - Coating, painting and spraying machine setters, operators and tenders
 - Engine and other machine assemblers
 - Grinding, lapping, polishing and buffing machine tool setters, operators and tenders, metal and plastic
 - Painters, transportation equipment
 - Team assemblers
 - Welders, cutters and welder fitters
- Every year North Carolina institutions graduate almost 3,400 in engineering fields
- North Carolina is a right to work state with one of the lowest unionization rates in the nation - 3.0 percent

NORTH CAROLINA'S MOTORSPORTS INDUSTRY

The motorsports industry in North Carolina contributes approximately \$5.9 billion to the state's economy and employs nearly 27,000 people. There are more than 1,000 motorsports-related businesses throughout the state.

The motorsports industry in North Carolina includes:

- Fifty race tracks (oval, dragstrips and road courses)
- More dragstrips (18) than any state except Texas
- Eight motorsports sanctioning bodies
- Six related driving schools
- Twelve racing museums
- Two of NASCAR's major television broadcast and production industry partners and a radio broadcast facility
- The \$165 million NASCAR Hall of Fame, expected to open in the spring of 2010
- The NASCAR Sprint All-star Challenge and two NASCAR Sprint Series Championship events
- Two NASCAR Busch Series Championship events
- Two International Hot Rod Association (IHRA) World Championship drag racing events



Photo courtesy of NASCAR Hall of Fame

WE ARE HOME TO A STRONG EXISTING INDUSTRY

- **Arvin Meritor**, a global supplier of a broad range of integrated systems, modules and components to the motor vehicle industry has facilities in Forest City, Fletcher and Laurinburg
- **ASMO**, a tier one automotive supplier, has its North American Headquarters in Statesville along with manufacturing facilities in Statesville, Greenville and Mount Airy
- **AW North Carolina** produces automatic transmission components for Toyota at its Durham Facility
- **Borg-Warner**, a recognized leader in advanced products and technologies in powertrain components and systems solutions, has a technical center in Asheville in addition to plants in Asheville and Fletcher
- **Bridgestone**, a worldwide leader in tire manufacturing and wholesale and original equipment sales operations, has a manufacturing facility in Oxford
- **Caterpillar**, the world's largest maker of construction and mining equipment, diesel and natural gas engines, and industrial gas turbines, has manufacturing facilities in Cary, Clayton, Franklin, Morganton, Sanford, Smithfield and New Bern
- **Consolidated Diesel**, a part of Cummins, manufactures diesel engines at its facility in Whitakers
- **Continental Teves**, one of the top automotive suppliers worldwide, is headquartered in Charlotte
- **Cooper-Standard Automotive Inc.** is a leading global automotive supplier specializing in the manufacture and marketing of systems and components for the automotive industry and has a manufacturing facility in Goldsboro
- **Daimler Buses** is the leading commercial bus company in North America and has its North American Headquarters in Greensboro
- **Dana** has facilities in Charlotte and Statesville and is a world leader in the supply of axles, driveshafts, and structural, sealing, and thermal-management products, as well as genuine service parts
- **Daimler Trucks**, formerly Freightliner, is North America's leading manufacturer of medium, heavy-duty diesel and specialized chassis trucks, and has manufacturing facilities in Cleveland, High Point, Gastonia, and Mount Holly
- **GKN** manufactures engine and other automotive components at its manufacturing facilities in Conover, Timberlake, Sanford and Mebane
- **Getrag**, which is headquartered in Newton, develops and manufactures transmissions for most of the major auto makers including GM, Ford, and Nissan
- **Goodyear**, a world leader in tires, has facilities in Asheboro, Fayetteville and Statesville
- **Honda** conducts power equipment R&D in Haw River
- **IAC**, a leading global supplier of automotive components and systems, has manufacturing facilities in Albemarle, Montgomery and Old Fort
- **Mack Trucks**, a part of the Volvo Group, will relocate its headquarters to Greensboro
- **Magnetti Marelli Powertrain USA**, a part of the Fiat group, manufactures fuel pumps and other automotive components in its Sanford facility
- **Purolator**, which has been manufacturing, marketing and distributing filters since 1923, has a manufacturing facility in Fayetteville
- **Stanadyne** has facilities in Jacksonville and Washington that manufacture a variety of automotive parts such as fuel pumps, fuel injectors and fuel filters
- **Timken** offers innovative friction management and power transmission products and services from its facilities in Charlotte, Columbus, Iron Station, Randleman, Rutherfordton and Wilmington
- **Thomas Built Buses**, a division of Daimler and North America's leading bus manufacturer, produces more than 15,000 buses a year at its High Point facilities
- **Volvo** provides transportation related products and services from their manufacturing facilities in Asheville, Charlotte, Greensboro, and Skyland
- **Volvo Truck** has its North American corporate headquarters in Greensboro

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