

# THE AUTOMOBILE INDUSTRY IN NORTH CAROLINA

## Overview

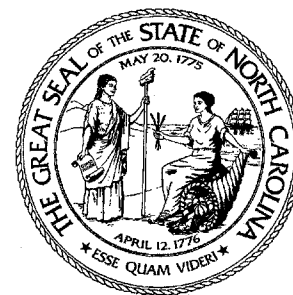
North Carolina ranks among the nation's foremost automotive parts and supply states and has actively promoted this sphere within the automotive industry for several years.<sup>145</sup> Although the state has no passenger car assembly plants, the state does have several truck, bus and heavy construction equipment assembly operations. North Carolina's focus on developing its automotive cluster has resulted in well over 1,000 companies operating in the state. In fact, Harvard Business School's Cluster Mapping Project reported that North Carolina's automotive cluster ranked 10<sup>th</sup> in the nation in total employment; in the South, only Tennessee had a higher national ranking (5<sup>th</sup>) in the area of automotive clusters. In fact, the enormity of the cluster is quickly apparent when one considers that the state's top 30 companies in the automotive cluster cumulatively employ just under 30,000 employees. (See table 30.) In addition, according to the Cluster Mapping Project, North Carolina had more people employed in its automotive cluster than Georgia, South Carolina, Virginia and Alabama; however, Tennessee and Kentucky were two SLC states that had more people employed in their automotive cluster than North Carolina.

## North Carolina's Automotive Cluster

Michael E. Porter, a renowned management expert at Harvard University, often is credited with conceptualizing the idea of clusters. For him, and others studying this trend in contemporary production and manufacturing circles, clusters are much more than loose conglomerations of like-minded companies. To these experts, a successful cluster system refers to the concentration of a number of firms within a related industry alongside numerous strands of cooperation among public and private sector organizations to effectively promote the flourishing of this industry. Specifically, Porter defines clusters in the following manner:

“Clusters are geographic concentrations of inter-connected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure. Clusters also often extend downstream to channels and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies or common inputs. Finally, many clusters include governmental and other institutions - such as universities, standard-setting agencies, think tanks, vocational training providers, and trade associations - that provide specialized training, education, information, research, and technical support.”<sup>146</sup>

According to the North Carolina Department of Commerce, the state has pursued the cluster approach for the automotive parts industry pro-actively. Consequently, North Carolina has recruited a variety of car components ranging from the textile fabrics used in car interiors (Visotec Automotive Products in Burke County) to the ceramic filters used in automotive catalytic exhaust systems (NGK Ceramics USA in Iredell County). In 2003, the



## State Facts

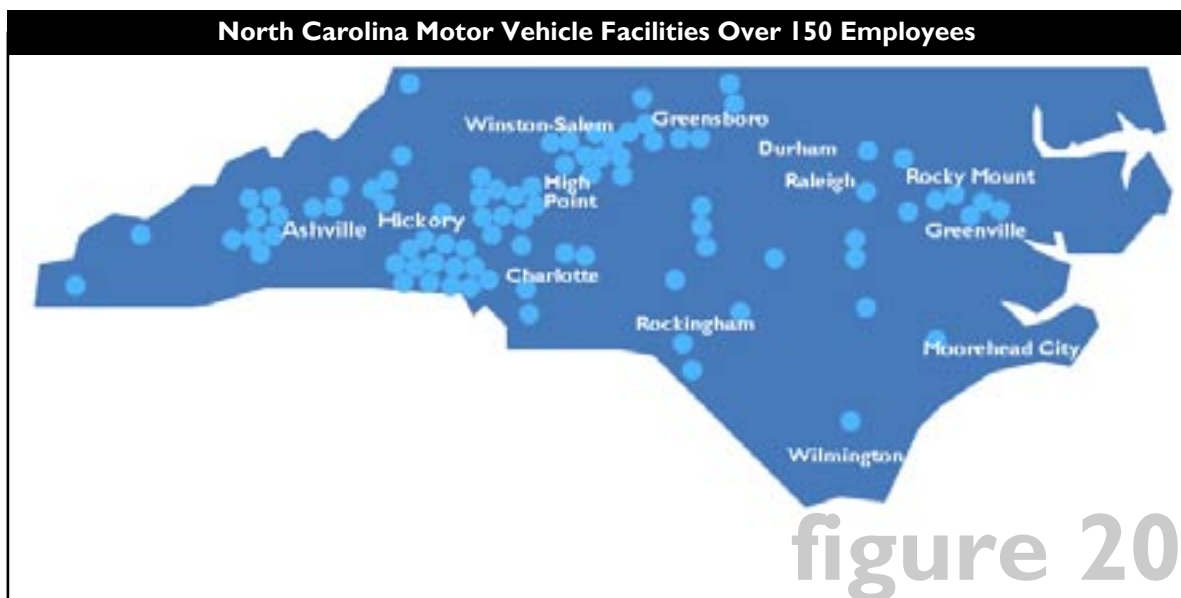
Percent of Total Workforce	4
Direct Employment	24,500
Auto-Related Employment	54,300
Auto-Dependent Employment	158,800
Wages	\$4.8 Billion
New Vehicle Dealerships	701
Dealership Annual Sales	\$18.1 Billion
New Registrations	455,261
Registered Vehicles	6,222,503
Publicly-Owned Vehicles	96,677
Licensed Drivers	5,690,000
Total Miles Driven	89.5 Billion

Source: 2002 Ward's Motor Vehicle Facts & Figures

department inventoried 1,010 company sites in North Carolina's automotive, truck and heavy equipment cluster. These businesses were identified based on the department's database searches, web page reconnaissance of companies, and survey of departmental regional staffs. Approximately 400 company sites are primary manufacturers of automobile, truck or bus bodies, construction vehicles and other heavy equipment or motor vehicle parts and accessories. The remaining over 600 firm locations supply equipment, components or materials to primary motor vehicle and heavy equipment manufactures. The latter group manufactures industrial and commercial machinery, primary and fabricated metals, rubber and plastic products, auto or cab interior fabrics, electronic equipment, chemical and petroleum products, and other miscellaneous items used to produce motor vehicles and construction equipment. The activities of these more than 1,000 companies generate a significant economic impact in North Carolina.

A number of the firm sites in the state's automotive, truck and heavy equipment cluster are located in the Charlotte region, specifically, 416 of the 1,010 companies. The Greensboro-Winston-Salem-High Point region had the next highest number of firms (214). The Asheville (western North Carolina) and the Raleigh, Durham, Chapel Hill regions each had over 100 companies in their regional automotive, truck and heavy equipment clusters.

In October 2002, the states's department of commerce identified 88 North Carolina motor vehicle manufacturing locations employing 150 or more workers. (See figure 20.) Most of these facilities are near interstate corridors running from and to the Asheville, Charlotte, Winston- Salem, Greensboro and Raleigh-Greenville areas. Also, there are well over 120 other equally large North Carolina companies (e.g., plastics, rubber, electronics, metals, textiles, glass) that supply materials, parts and equipment to these motor vehicle manufacturing facilities. Between 1990 and 1999, just under 16,100 jobs were created in North Carolina's automotive cluster, a trend that ranked the state 10<sup>th</sup> among the 50 states in terms of its automotive cluster's size. In fact, there were 36,663 persons employed in the cluster in 1999, almost 3 percent of the cluster's total national employment level.



Source: North Carolina Department of Commerce

In terms of contributions to the state's gross state product (GSP), the department notes that it "is clear that companies in the automobile cluster are continually adding capacity and upgrading machinery and equipment."<sup>147</sup>

For example, from 1990 to 2000, the contribution of the motor vehicles and transportation industries to the state's GSP grew by 212 percent; in contrast, the national growth rate for these industries during the same time period amounted to 68 percent. The department indicates that since 2000, its community investment reports "show continued job growth and investment in the sector."<sup>148</sup> The department also notes that between 2000 and 2002, \$663.5 million in investments flowed into the sector, creating 3,000 new jobs. According to another report, in 1988, the state had 65 Japanese companies, employing about 4,752 workers, supplying parts to the automobile industry; by 2003, the state was home to about 160 such companies generating about 16,000 jobs with a cumulative investment of \$3.3 billion.<sup>162</sup> About 65 percent of those companies are manufacturing companies, with sales and service (30 percent) and research and development (5 percent) making up the rest.

While the state's expertise in the automotive parts industry is internationally-renowned, there are indications that the industry will expand in the coming years.<sup>150</sup> In 2002, the state landed three new Japanese companies and had three expansions in the parts business. These investments totaled \$202.5 million while adding 635 jobs. In January 2003 alone, there were two major announcements concerning Honda Power Equipment in Sweepsonville and NT Techno in Oxford. While Honda Power Equipment, which makes engines for lawn mowers and other power equipment, indicated it would expand its site by about 70,000 square feet and hire 200 additional full-time workers and seasonal help, NT Techno, which makes auto transmission parts, announced plans to build a 63,000-square foot plant and employ 40 workers.

Two more examples of North Carolina-based companies servicing the automobile industry are AW North Carolina and Viscotech Automotive Products, both recent additions to the state's manufacturing base.<sup>151</sup> AW North Carolina, located in Durham with 700 workers, makes parts for the Toyota Camry, while Viscotech Automotive, based in Morgantown, makes car fabrics and plans to employ an additional 200 workers in the next two years.



AW North Carolina assembly line

A thriving research and development component remains a vital ingredient in the expansion of an effective cluster. In this regard, North Carolina is fortunate to have several stellar research programs related to the automobile industry at two of its premier higher educational institutions. At the University of North Carolina in Charlotte, the Center for Precision Metrology, the Motorsports and Automotive Engineering program and the Cameron Applied Research Center are important here. Similarly, at North Carolina State University, the Institute for Transportation Research and Education, the Precision Engineering Center, the Integrated Manufacturing Systems Engineering Institute and the Center for Robotics and Intelligent Machines are vital components in the state's automotive research area. In addition to these major programs, a number of other institutions of higher education scattered across the state carry out industrial engineering, technical and design programs for the automotive industry. Finally, the state's community college system offers a number of programs in motor sports and automotive systems technology that undoubtedly bolster the level of technical competence in the state's automotive cluster.

In promoting the state as one with a thriving automotive cluster, the department notes a number of North Carolina advantages. Some of these advantages include the state's central location; existing automotive parts cluster, racing industry and truck components; skilled workforce; convenient transportation systems; deep-water ports; and the applied auto

industry research at the University of North Carolina system, the automotive manufacturing and technology programs at Duke University and the auto industry technology training programs at the state's community college system.

Another point worth the making is that North Carolina automotive, trucking and heavy equipment cluster has a thriving and growing motor sports component. This relatively new industrial sector includes companies manufacturing race cars, racing engines and other high tech automotive racing components. North Carolina is home to almost every major NASCAR Winston Cup, Busch Series and Craftsman Truck Team. Morrisville is North Carolina's center of racing activity, the location of the \$100 million NASCAR research and development lab as well as to a NASCAR-sanctioned trade school. There are over 50 racetracks and 10 racing museums in the state. North Carolina's motor sports industry complements the state's automotive, truck and heavy equipment cluster, engages universities in applied research and community colleges in technical training, stimulates tourism and hospitality industries, and provides numerous investment and trade opportunities.

Even though the department indicated that the state has not conducted an economic impact study of the automobile cluster's impact on the state economy, it did provide information related to the 30 largest companies (of the 1,010) in the state's automotive cluster. Table 30 details this information.

### Thirty Largest Manufacturing Establishments in North Carolina's Automotive Cluster

Company	Location	Employees	Product
Arvin Meritor (1981)	Maxton	300	Truck and Trailer Products, Axles
Arvin Meritor (1988)	Fletcher	750	Large Truck Transmissions and Clutches
ASMO Co. Ltd. (1988)	Stateville	825	Motors and Generators
BorgWarner Fuel Systems	Charlotte	140	Fabricated Plate Work
BorgWarner Cooling Systems (1938)	Fletcher	550	Design and Supply of Cooling Systems for SUVs and Trucks
BorgWarner Turbo Systems (1938)	Asheville	100-249	Turbochargers for Diesel Engines
BTR Sealing Systems	Reidsville	750	Motor Vehicle Parts and Accessories
Collins & Aikman Corp. (1963)	Farmville	768	Automotive Upholstery
Collins & Aikman Corp. (1966)	Old Fort	600	Automotive Carpets and Rugs
Consolidated Diesel Co. (1980)	Whitakers	1,758	Internal (Diesel) Combustion Engines
Continental Teves (1993)	Morganton	600	Vehicle Brake Pads and Calipers
Continental Teves (1997)	Fletcher	450	Anti-lock Brakes and Traction Control
Cooper Standard Automotive (1984)	Goldsboro	500	Rubber, Metal and Plastic Seals and Trim
Dana Corp. (1939)	Statesville	600	Axles, Transmissions, Brakes, Suspensions
Dana Corp. (1939)	Gastonia	900	Oil, Air and Fuel Transmission Filters
Douglas Battery (1921)	Winston-Salem	1,000	Dry and Wet Batteries for All Vehicles
Draftex, Inc.	Salisbury	786	Motor Vehicle Parts and Accessories
Fichtel & Sachs Industries, Inc.	Gastonia	701	Motor Vehicle Parts and Accessories
Freightliner Corp. (1942)	Mount Holly	2,500	Truck Bodies
Freightliner Corp. (1942)	Gastonia	1,100	Truck Bodies
Freightliner Corp. (1942)	Cleveland	3,000	Industrial Trucks, Tractors, Trailers and Stackers
GKN Automotive Inc. (1978)	Sanford	615	Automobile Front Wheel Drive Components
GKN Automotive Inc.	Mebane	725	Motor Vehicle Parts and Accessories
Magneti Marelli Powertrain, USA	Sanford	600	Carburetors, Pistons, Rings, and Valves
Marconi Commerce Systems (1966)	Greensboro	1,600	Fuel Dispensing Equipment; Service Station and Gasoline Pumps and Equipment
NACCO Materials Handling Group (1978)	Lenoir	475	Industrial Trucks, Tractors and Trailers
NACCO Materials Handling Group (1993)	Greenville	200	Material Handling and Loading Equipment
Purolator Products Co. (1921)	Fayetteville	400	Fluid Mechanics and Porous Media Technology
Stanadyne Diesel Systems (1977)	Jacksonville	265	Diesel Fuel Pumps and Filters for Agricultural Machinery
Thomas Built Buses Inc. (1916)	High Point	2,000	Truck Bodies
Volvo Trucks, N.A., Inc. (1928)	Greensboro	2,000	Volvo Truck Headquarters; Industrial Trucks, Tractors, Trailers and Stackers
Volvo Construction Equipment (1975)	Skyland	450	Front End Tractor Shovels, Dump Trucks, Haulers and Loaders

Source: North Carolina Department of Commerce, November 2003

Note: When known, the company's inaugural year is included in parentheses.

As demonstrated in table 30, the history of automobile parts manufacturing in North Carolina is a lengthy one, going back as much as 80 to 90 years and continues to be a vital aspect of the state's economic prowess in the South. Thomas Built Buses, for instance, (now a part of DaimlerChrysler when the latter purchased Freightliner, LLC) maintains a thriving manufacturing plant in High Point, North Carolina.<sup>152</sup>

Manufacturing mostly school buses, the company is in the process of completing a \$39.7 million, 275,000 square foot new production facility on a 90-acre site. The three-quarter mile-long assembly line will have 75 work stations and be capable of producing 22 buses per shift. This expansion effort will add 178 new jobs to the current employment level (estimated at 1,600) when production reaches capacity. Thomas



Thomas school buses outside the company's facility under construction in High Point, North Carolina

Built Buses holds approximately one-third of the conventional school bus market in the United States, all manufactured at the High Point location.

Another automobile industry-related company located in North Carolina is Marconi Commerce Systems (formerly Gilbarco).<sup>153</sup> This Greensboro-headquartered company is one of the largest suppliers of fully integrated point-of-service systems in the world to the retail petroleum industry. The company is also the leading supplier of fuel dispensing equipment to the retail petroleum market and employs over 4,000 employees worldwide, with about 1,600 of them situated in North Carolina. In addition to the manufacturing, research and development facilities in Greensboro, Marconi maintains production operations in Germany, Italy, the United Kingdom, Argentina, Brazil, China and Australia.

Another North Carolina-based company active in the automobile parts industry is Douglas Battery Manufacturing Company of Winston-Salem.<sup>154</sup> Established in 1921, the company now manufactures over 5 million battery units per year at two state-of-the-art manufacturing facilities. Estimated to have about 860 employees at its North Carolina facility, the company's automotive division is its largest business segment, offering a full range of battery types including automotive; commercial/heavy duty vehicles; marine/RV/personal watercraft; lawn and garden; fleet series; motorcycle; lawn and garden tractor; and golf cart and sweeper/scrubber batteries.

### **Economic Incentives Offered by North Carolina**

According to the North Carolina Department of Commerce, the state provides two types of incentive packages to companies in the automotive cluster:

- » Discretionary funds available in the form of loans and grants under such programs as the *One N.C. Fund* and the Job Development Investment Grant Program (JDIG); and
- » Statutory funds available under the William S. Lee (WSL) Tax Credit Act.

#### ***Discretionary Funds***

Like a number of other states, North Carolina maintains a recruitment fund to attract new companies to the state or to help retain companies already in the state from relocating to another state.<sup>155</sup> While the *One N.C. Fund* has awarded nearly \$30 million in cash to 181 companies in the past decade, at the end of the 2003 legislative session in late July 2003, the fund was almost completely depleted. Of the nearly \$6.5 million left in the fund, only \$59,000 remained unallocated. The list of companies approved for funds this year includes an automobile parts distributor amongst several other companies. According to a 10-year review (1993 to 2003) of 76 North Carolina projects that received cash awards under this program, the conclusion was that:

- » As a matter of policy, North Carolina does not limit the number of times a company may receive funding, and 5 percent of companies received two or more awards for different projects;
- » The amount awarded for each job created since late 2001 varied from \$312.50 to \$7,894.74; and
- » About a dozen companies may have closed after receiving about \$2.5 million from the *One N.C. Fund* with only about \$700,000 recovered.

In response to this report, North Carolina Commerce Secretary James Fain noted that "lawmakers established broad guidelines to give officials maximum flexibility to decide which companies receive money."