

MICHIGAN AUTOMOTIVE RESEARCH & DEVELOPMENT DIRECTORY

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INTRODUCTION

MICHIGAN: THE NATION'S LEADER IN HIGH-TECH R&D

Overall, R&D is a major industry in Michigan.

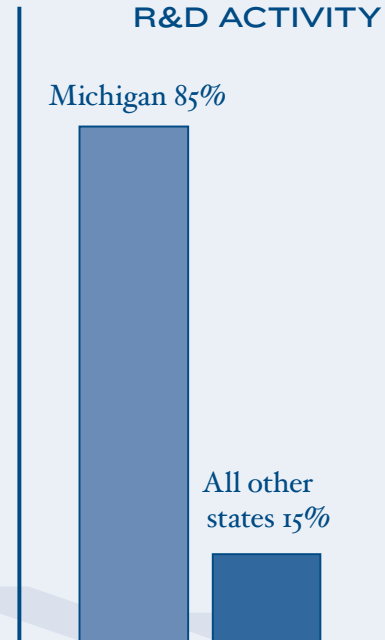
- #1 state for vehicle-related R&D activity, spending \$13.5 billion and employing 65,000¹
- #1 state in industrial R&D intensity: ratio of R&D dollars to Gross State Product¹
- #1 state in per capita R&D investment²
- The University of Michigan #1 public university for R&D spending 1991–2000.¹
- #4 overall in high-tech employment, more than 531,000³
- #2 State for total R&D investment—\$18.8 billion in 2000¹

1. In 2000, the most recent year for which full information is available (National Science Foundation)

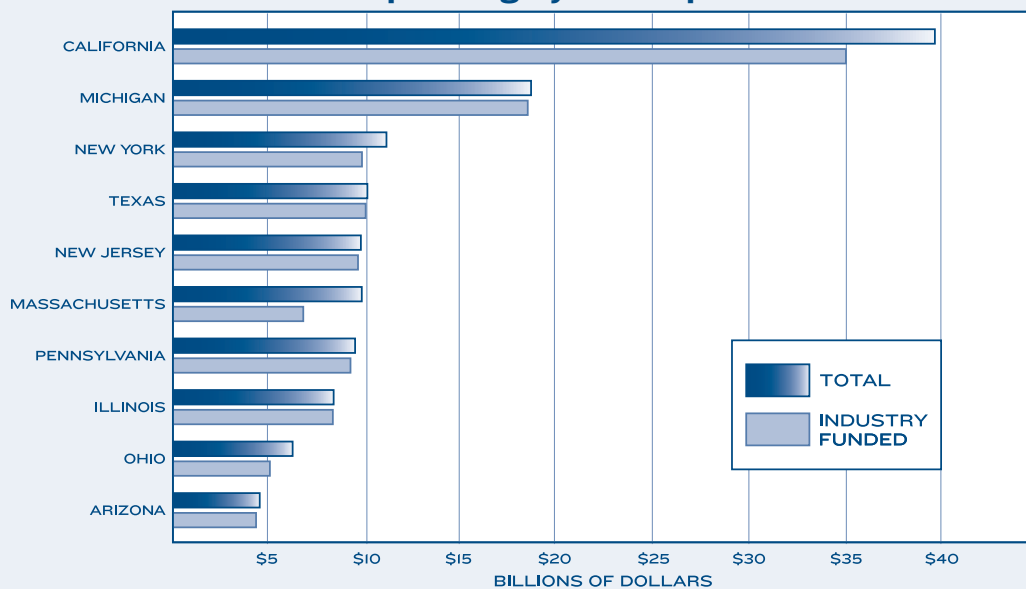
2. U.S. Census Bureau, *Statistical Abstract of the US*, 1999

3. Altarum Institute, Center for Automotive Research, 2002

VEHICLE-RELATED R&D ACTIVITY



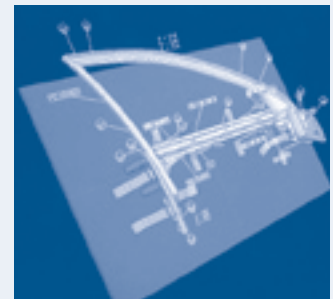
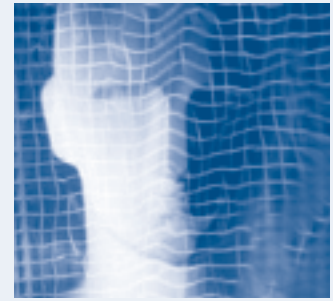
Total R&D Spending by the Top Ten States in 1999



Crossover R&D

Industry-related R&D starts with the search for product improvement. But it does not end there. Innovations in the automotive manufacturing process are crossing over into other industries. Those solutions morph into new processes, in turn migrating to other sectors with unforeseen and often surprising results. There are no limits to potential applications.

- Consider the 3-D CAT scan technology developed by Ford Motor scientists for nondestructive evaluation of auto parts. It has evolved into the scanners now used in diagnosis by hospitals.
- CAD, CAM and CAE introduced new efficiencies into the engineering of auto components and systems. They have become indispensable tools for all manner of design and modeling disciplines, among them architectural design and molecular research.
- Just-in-time inventory control, logistics and quality management all started as solutions to specific auto-assembly problems. They have evolved to become the science of logistics and supply-chain management, with applications in every industry and in every country.
- QQC is a small Dearborn-based company specializing in lasers. It has licensed laser technology to auto supply giant Visteon for diamond-hardening applications. The same technology is being used by Boeing for aircraft tools, and has been adapted for use in arthroscopy surgical instrument equipment by Linvatec and in ophthalmology by Alcon Laboratories.
- Or take POM Group, the Auburn Hills-based prototyper for the automakers. Its direct metal deposition process is a major advance in metalworking with applications in aerospace and defense, electronics, consumer products and health care.



Directory of R&D Facilities in Michigan

This is the first directory of vehicle-related R&D facilities published in Michigan, and in fact the only one of its kind in the nation. It lists 135 companies that have facilities located in the state devoted to basic or applied vehicle-related research, engineering, testing and/or product development. They range from multi-national, multi-industry conglomerates to one-shop, homegrown enterprises.

How to Use This Directory

This directory is available in an online version at MEDC and CAR Web sites. The online version is searchable by category and will be updated frequently.

Following the alphabetic company information section in this directory are a number of indexes. The indexes are grouped by: company location, vehicle components/specialities, company activities and special services. After finding a company name in one of these indexes, turn to the main alphabetic section for further information regarding that company.

Information in the listings include:

- Name, address, phone numbers and Web site of research facilities
- Parent organization
- Principal executives at the facility
- Employment and make-up by degree and specialty
- Description of R&D activities
- Description of the facility
- Services offered by the facility

Cascade Engineering
 2551 36th Street SE, Grand Rapids, MI 49512
 ph: 616.975.4800 • fx: 616.975.4707 • www.cascadeeng.com

PARENT ORGANIZATION Cascade Engineering	R&D ACTIVITIES Concept design, product design, FEM/FEA, process engineering, materials engineering and testing
PRINCIPALS Fred Keller, CEO Mike Vitz, President, COO Steve Peterson, CFO John Kundrat, VP Technology Jennifer Fischer, Dir Corp Development	PRODUCTS Interior automotive trim, exterior automotive body panels, under hood and firewall sound abatement products, interior and exterior truck components
TOTAL EMPLOYMENT 900	FACILITY DESCRIPTION CAD/CAM/CAE design center, materials laboratory, CMM lab, R&D laboratory and process engineering facility
AUTOMOTIVE R&D SPENDING 30%	OTHER SERVICES Materials lab services, CMM lab services, custom compounding of thermal plastics and design/analysis
ECONOMIC ACTIVITY 2001 32 Million	
PROFESSIONAL STAFF Engineers and scientists: 60 Technicians: 20	

MSX
Vehicle Development and Engineering Center
 275 Rex Boulevard, Auburn Hills, MI 48316
 ph: 248.299.1000 • www.msxi.com

PARENT ORGANIZATION MSX International, Inc	R&D ACTIVITIES Full vehicle product development; concepts through prototype and validation
PRINCIPALS Mike Preiner, Sr VP Engineering Gerry Bryce, VP Product Engineering Mike Evans, Dir Shops, Vehicle Services	PRODUCTS Vehicle body and chassis development services (engineering, supporting system and vehicle performance validation)
TOTAL EMPLOYMENT 200	FACILITY DESCRIPTION Vehicle development center includes model and tool shop, prototype, build and fabrication facilities
AUTOMOTIVE R&D SPENDING 100%	OTHER SERVICES Engineering consulting, product development and program management
ECONOMIC ACTIVITY 2001 5.2 Million	
PROFESSIONAL STAFF Program engineering management: 40 Product designers/management: 60 Shop test/vehicle development technicians: 60 Vehicle prototype/special vehicle technicians: 40	



COMPANY INFORMATION

The main section of this directory is arranged by company name in alphabetic order. The entries in the main alphabetic section contain information related to the company.

AFL Automotive

999 Republic Drive, Allen Park, MI 48101
ph: 313.441.5400 • fx: 313.441.5490 • www.aflauto.com

07/2002

PARENT ORGANIZATION

Alcoa Fujikura Ltd

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Product development and engineering

PRODUCTS

A diversified base of products which interface or are integral parts of the electronic/electrical distribution systems. Assemble and deliver integrated electrical systems

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on projects for others and work for hire

Altair Engineering, Inc

1820 E Big Beaver Road, Troy, MI 48083
ph: 248.614.2400 • fx: 248.614.2411 • www.altair.com

07/2002

PARENT ORGANIZATION

Altair Engineering, Inc

PRINCIPALS

Jim E Brancheau, CTO
Mike Heskitt, VP Global Engineering
James P Dagg, VP Global Software Development
Tim Smith, Dir Design Engineering
Rick Darling, Dir Development and Testing

AUTOMOTIVE R&D SPENDING

90%

TOTAL EMPLOYMENT

650

ECONOMIC ACTIVITY 2001

\$63 Million

PROFESSIONAL STAFF

Engineers: 400
Engineering software developers: 130
PhD engineers: 30
Technicians: 5
Vehicle development engineers: 6

R&D ACTIVITIES

Design development, process automation and engineering software. Including: structural optimization, robust design, alternative materials, NVH, durability, safety/energy management and manufacturing processes

PRODUCTS

From components to full vehicle systems

FACILITY DESCRIPTION

Product development and test facilities

OTHER SERVICES

Consulting

American Axle & Manufacturing

AAM Technical Center

2965 Technology Drive, Rochester Hills, MI 48309
ph: 800.299.AXLE (2953) • www.aam.com

07/2002

PARENT ORGANIZATION

American Axle & Manufacturing

PRINCIPALS

Daniel V Sagady, VP Engineering,
Product Development
Richard F Dauch, VP Sales

TOTAL EMPLOYMENT

Not reported

PERCENT EMPLOYMENT R&D

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research, product development and testing

PRODUCTS

Product design and development, competitive analysis,
systems integration, chassis systems, forged products,
validation and certification of driveline systems

FACILITY DESCRIPTION

80,000 sq ft facility. Design, validation and testing
facility

OTHER SERVICES

Not reported

Analytical Process Systems

1771 Harmon Road, Auburn Hills, MI 48236
ph: 248.393.0700 • fx: 248.393.0800 • www.aps-mich.com

07/2002

PARENT ORGANIZATION

Analytical Process Systems

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

CAD department
Electrical engineers
Mechanical engineers
Software engineers

R&D ACTIVITIES

Engineering, testing and product development

PRODUCTS

Single source solutions provider for mobile and station-
ary source emissions, specialty testing equipment,
control system integration and facility safety systems

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Consulting services, design and build only or complete
turnkey solutions

ArvinMeritor Automotive

2135 W Maple Road, Troy, MI 48084
ph: 248.435.1000 • fx: 248.435.1393 • www.arvinmeritor.com

07/2002

PARENT ORGANIZATION

ArvinMeritor Automotive

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers

R&D ACTIVITIES

Engineering

PRODUCTS

Broad range of integrated systems, modules and components to OEMs. In addition to coil coating applications

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on projects for others

ATEQ Corporation

42000 Copperrick Road, Suite A4, Canton, MI 48187
ph: 734.451.9449 • fx: 734.451.9462 • www.atequsa.com

07/2002

PARENT ORGANIZATION

ATEQ Corp

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Engineering and testing

PRODUCTS

Design and manufacture high technology leak testers for the manufacturing industry

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

None

Autoliv Inc

1320 Pacific Drive, Auburn Hills, MI 48326
ph: 248.475.9000 • www.autoliv.com

07/2002

PARENT ORGANIZATION

Autoliv Inc

PRINCIPALS

Ray Pekar, Facility Director

TOTAL EMPLOYMENT

450

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 200

Professionals: 190

Technicians: 60

R&D ACTIVITIES

Design and development of vehicle safety components. Vehicle testing of automotive safety systems

PRODUCTS

Safety restraints

FACILITY DESCRIPTION

North American headquarters containing crash laboratory

OTHER SERVICES

Component and full vehicle crash testing

Automotive Technologies International Inc

PO Box 140, Romeo, MI 48065
ph: 810.444.4274 • fx: 810.724.2173

07/2002

PARENT ORGANIZATION

Automotive Technologies International Inc

PRINCIPALS

David Breed, CEO, President

Stuart Davis, Facility Manager

TOTAL EMPLOYMENT

14

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 9

PhD Scientists: 2

Technician: 1

R&D ACTIVITIES

Develop automotive safety systems

PRODUCTS

Sensors

FACILITY DESCRIPTION

Lab and prototype facility

OTHER SERVICES

Develop systems in partnership with other companies

AVL Powertrain Engineering, Inc

47519 Halyard Drive, Plymouth, MI 48170
ph: 734.414.9600 • fx: 734.414.9690 • www.avl.com/pei

07/2002

PARENT ORGANIZATION

AVL Powertrain Engineering, Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

120

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Development engineers
Software engineers

R&D ACTIVITIES

Testing and engineering

PRODUCTS

Modern gasoline and diesel engines as well as alternatively fuelled power plants for a world-wide customer base. Totally new design and development of an engine or engine family and improvement of existing engines

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Complete test cell facility. Powertrain validation testing with 20 dispersed test sites including vehicle facilities

Aztec Manufacturing

15378 Oakwood Drive, Romulus, MI 48174
ph: 734.942.7433 • www.aztecmfgcorp.com

07/2002

PARENT ORGANIZATION

Aztec Manufacturing

PRINCIPALS

Gregory Lopez, VP Operations
Mike Radeka, Dir Product Development
Dan Crowther, General Manager

TOTAL EMPLOYMENT

138

AUTOMOTIVE R&D SPENDING

10%

ECONOMIC ACTIVITY 2001

\$28 Million

PROFESSIONAL STAFF

Engineers: 7
Product development: 2
Technicians: 3

R&D ACTIVITIES

Automotive component product development and engineering

PRODUCTS

Chassis, suspension and powertrain components

FACILITY DESCRIPTION

Product development, engineering office, quality lab, prototype tool room and production machine shop

OTHER SERVICES

Work on projects for others

BASF Corp

1609 Biddle Avenue, Wyandotte, MI 48192
ph: 800.527.TECH • fx: 734.324.5254 • www.basf.com

07/2002

PARENT ORGANIZATION

BASF AG

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

North America: 14,000

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

North America: \$6.9 Billion

PROFESSIONAL STAFF

Chemical engineers

R&D ACTIVITIES

Basic/applied research and product development

PRODUCTS

Molded automotive parts made of microcellular polyurethane (MPU) for suspension applications. Jounce bumpers, spring aids, coil spring isolators, shock mounts and body mounts made of Elastocell®

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

Borg-Warner Air Fluid Systems

6700 I8½ Mile Road, Sterling Heights, MI 48314
www.bwauto.com

07/2002

PARENT ORGANIZATION

Borg-Warner Air Fluid Systems

PRINCIPALS

Not Reported

TOTAL EMPLOYMENT

114

AUTOMOTIVE R&D SPENDING

Not Reported

ECONOMIC ACTIVITY 2001

Not Reported

PROFESSIONAL STAFF

Design engineers
Mechanical engineers

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Engine performance reliability and fuel economy, transmissions, four-wheel drive systems and air fluid systems.

FACILITY DESCRIPTION

Not Reported

OTHER SERVICES

Work on projects for others

BOS Automotive Inc

2619 Product Drive, Suite 108, Rochester Hills, MI 48309
ph: 248.852.5846 • fx: 248.852.5921 • www.bos.de

07/2002

PARENT ORGANIZATION

BOS GmbH & Co KG

PRINCIPALS

Mark Lobanoff, President
Tom Steigerwald, Sales Manager

TOTAL EMPLOYMENT

25

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

\$40 Million

PROFESSIONAL STAFF

Designers: 7
Engineers: 4
Program managers: 5
Technicians: 3

R&D ACTIVITIES

Develop, design, and build luggage covers, restraining nets, passenger sun protection systems and cargo management systems

PRODUCTS

Not reported

FACILITY DESCRIPTION

Sales, program, management, engineering and prototype facility

OTHER SERVICES

Not reported

Bosal International North America

345 Metty Drive, Ann Arbor, MI 48103
ph: 734.994.4382 • fx: 734.994.0477 • www.bosalusa.com

07/2002

PARENT ORGANIZATION

Bosal International Lummen, Belgium

PRINCIPALS

John Miles, President
Mike Matthews, Dir Engineering

TOTAL EMPLOYMENT

21

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$4 Million

PROFESSIONAL STAFF

Mechanical engineers: 19

R&D ACTIVITIES

Basic research testing

PRODUCTS

Exhaust systems for original equipment customers

FACILITY DESCRIPTION

Anechoic chamber (noise data)—model shop, noise test track

OTHER SERVICES

Facilities available for use by others

Bosch Rexroth Corp

1701 Harmon Road, Auburn Hills, MI 48236

ph: 248.393.3330 • fx: 248.393.2893 • www.boschrexroth-us.com

07/2002

PARENT ORGANIZATION

Robert Bosch GmbH

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Applications engineers

R&D ACTIVITIES

Product development and engineering

PRODUCTS

Assembly technology—providing standardized modules for the fast, simple execution of manual and automated production lines. Products include ball and roller rail systems, linear bushings and shafts, ball screw assemblies, linear motion systems, aluminum structural framing, ergonomic workstations and accessories, robot and handling systems, flexible assembly conveyors and planning software and training

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Consulting and work on projects for others

Branson Ultrasonics Corporation

2650 Commerce Drive, Rochester Hills, MI 48309

ph: 248.299.0400 • fx: 248.299.9343 • www.branson-plasticsjoin.com

07/2002

PARENT ORGANIZATION

Emerson

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design engineers

Mechanical engineers

R&D ACTIVITIES

Product development and engineering

PRODUCTS

Instrument panels, glove box/knee bolsters, instrument clusters, interior trim, HVAC housings, intake manifolds, carbon canisters, electronic modules, resonators and exterior lighting

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on projects for others

Bruel & Kjaer

15873 Middlebelt Road, Livonia, MI 48154
ph: 734.522.8600 • www.bksv.com

07/2002

PARENT ORGANIZATION

Spectris Technology

PRINCIPALS

Gary Newton, Facilities Mgr, Sales

TOTAL EMPLOYMENT

7

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

\$4 Million

PROFESSIONAL STAFF

Application engineer: 2

Facilities: 1

Sales: 2

R&D ACTIVITIES

Not reported

PRODUCTS

Noise, vibration and harshness reduction equipment

FACILITY DESCRIPTION

Training facilities, service and support center

OTHER SERVICES

Consulting, equipment calibration and services

Burke E Porter Machinery Co

730 Plymouth Avenue NE, Grand Rapids, MI 49505
ph: 616.459.9531 • fx: 616.459.1032 • www.bepco.com

07/2002

PARENT ORGANIZATION

Burke E Porter Machinery Co

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Systems engineers

R&D ACTIVITIES

Product development and systems engineering

PRODUCTS

Advanced electrical, mechanical, and software solutions for automotive test systems. Test systems and test stands

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on projects for others

Calsonic Kansei North America Inc

27000 Hills Tech Court, Farmington Hills, MI 48331
ph: 248.848.4876 • fx: 248.848.4850 • www.calsonic.com

07/2002

PARENT ORGANIZATION

Calsonic Kansei Corp

PRINCIPALS

David Keeney, VP Engineering

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$3.6 Billion

PROFESSIONAL STAFF

Electrical engineers
Technicians
Thermal engineers

R&D ACTIVITIES

Testing product development

PRODUCTS

HVAC, exhaust, engine cooling and interior modules

FACILITY DESCRIPTION

Mechanical and electronic

OTHER SERVICES

Wind tunnel and EMC test chamber

Cascade Engineering

5251 36TH Street SE, Grand Rapids, MI 49512
ph: 616.975.4800 • fx: 616.975.4707 • www.cascadeng.com

07/2002

PARENT ORGANIZATION

Cascade Engineering

PRINCIPALS

Fred Keller, CEO
Mike Volz, President, COO
Steve Peterson, CFO
John Kundrat, VP Technology
Jennifer Fischer, Dir Corp Development

TOTAL EMPLOYMENT

900

AUTOMOTIVE R&D SPENDING

50%

ECONOMIC ACTIVITY 2001

\$2 Million

PROFESSIONAL STAFF

Engineers and scientists: 60
Technicians: 20

R&D ACTIVITIES

Concept design, product design, FEM/FEA, process engineering, materials engineering and testing

PRODUCTS

Interior automotive trim, exterior automotive body panels, under hood and firewall sound abatement products, interior and exterior truck components

FACILITY DESCRIPTION

CAD/CAM/CAE design center, materials laboratory, CMM lab, R&D laboratory and process engineering facility

OTHER SERVICES

Materials lab services, CMM lab services, custom compounding of thermal plastics and design/analysis

Citation Corporation

27275 Haggerty Road, Suite 420, Novi, MI 48377
ph: 248.522.4500 • www.citationcorp.com

07/2002

PARENT ORGANIZATION

Citation Corp

Lab technician: 2

Test engineer: 1

PRINCIPALS

Karl Sekerka, VP Sales, Marketing
Vincent Genise, VP Product Engineering,
Development

R&D ACTIVITIES

Product development, design, structural analysis,
manufacturing process simulation and validation test

TOTAL EMPLOYMENT

50

PRODUCTS

Chassis, suspension, brakes, body and powertrain
components

PERCENT EMPLOYMENT R&D

90%

FACILITY DESCRIPTION

Facility contains design, analysis, simulation, materials
and structural labs

ECONOMIC ACTIVITY 2001

\$800 Million

OTHER SERVICES

Consulting

PROFESSIONAL STAFF

Application engineers: 3

Design engineer: 5

Engineering analyst: 5

Clark Engineering Services, LLC

821 E Front Street, Buchanan, MI 49107
ph: 616.697.8632 • fx: 616.697.4525 • www.ceslab.com

07/2002

PARENT ORGANIZATION

Clark Engineering Services, LLC

R&D ACTIVITIES

Testing

PRINCIPALS

Not reported

PRODUCTS

CES product testing experience ranges from small
components such as starters and air motors to trans-
missions and axles in excess of 1000 horsepower

TOTAL EMPLOYMENT

109

FACILITY DESCRIPTION

The CES test facility covers over 55,000 sq ft located
on a 24-acre test site. The facility is capable of testing
vehicles, sub-assemblies or individual components

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

\$5 Million to \$10 Million

OTHER SERVICES

Work on projects for others and consulting

PROFESSIONAL STAFF

Test engineers

Climax Research Services

51229 Century Court, Wixom, MI 48393
ph: 248.960.4900 • fx: 248.960.4970 • www.climaxresearch.com

07/2002

PARENT ORGANIZATION

Climax Research Services

PRINCIPALS

A Duane Rose, President
Dr John M Tartaglia, Engineering Mgr

TOTAL EMPLOYMENT

42

AUTOMOTIVE R&D SPENDING

95%

ECONOMIC ACTIVITY 2001

\$3.8 Million

PROFESSIONAL STAFF

Chemists: 4
Engineers: 9
Engineering interns: 3
Technicians: 12

R&D ACTIVITIES

Metallurgical engineering and testing

PRODUCTS

Research/test new alloy and designer metals

FACILITY DESCRIPTION

Laboratories for chemical analysis, metallurgy, corrosion, wear, fatigue testing and heat treatment

OTHER SERVICES

Consulting and conduct engineering projects for others. Facilities available for use by others on contract basis

Collins & Aikman Corporation

Global Product Development Division

47785 W Anchor Court, Plymouth, MI 48170
ph: 734.207.7000 • www.colaik.com

07/2002

PARENT ORGANIZATION

Collins & Aikman Corp

PRINCIPALS

Graham Thompson, Sr VP GPDD
Surendra Khambete, Sr Dir Materials Tech
Christopher Griffen, Sr Dir Acoustics Tech
Satha T Raveendra, Dir CAE Tech
Terry Anderson, Dir Materials Dev

TOTAL EMPLOYMENT

41

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

NVH engineers: 22
NVH technician: 5
PhD: 6

R&D ACTIVITIES

Basic and applied research, testing, engineering and product development

PRODUCTS

Auto interiors, interior panels, headliners, carpets and trunk liners

FACILITY DESCRIPTION

Vibro-acoustic testing

OTHER SERVICES

Materials testing, physical properties, acoustic, vibration, testing and analysis

Control Power-Reliance, LLC

310 Executive Drive, Troy, MI 48083
ph: 248.583.1020 • fx: 248.583.9496 • www.cp-r.com

07/2002

PARENT ORGANIZATION

JE Myles, Inc and EXPERTEK

PRINCIPALS

Ed Myles, President
Scott Myles, Vice President

TOTAL EMPLOYMENT

43

AUTOMOTIVE R&D SPENDING

90%

ECONOMIC ACTIVITY 2001

\$5 Million

PROFESSIONAL STAFF

Engineers: 9

R&D ACTIVITIES

6-axis rail and truck impact drive file development and transportation simulation testing of parts, containers and dunnage

PRODUCTS

Test vehicle sub-assemblies in their respective shipping containers and dunnage

FACILITY DESCRIPTION

An array of product functional testing equipment including 6-axis, 15,000 lb capacity testing machines and a rail impact test machine. This is a proprietary full size rail car (15 ft long) operating on over 100 ft of track with computer controlled acceleration, deceleration simulating actual field conditions.

OTHER SERVICES

Consulting and testing services, validation of prototype parts, containers and dunnage designs for major automotive companies and their Tier 1 and 2 suppliers

Corrsys-Datron Sensorsystems, Inc

21654 Melrose Avenue, Building 16, Southfield, MI 48075
ph: 248.204.0850 • fx: 248.204.0864 • www.corrsys-datron.com

07/2002

PARENT ORGANIZATION

Corrsys-Datron Sensorsystems, Inc

PRINCIPALS

Frank W Ervin III, Vice President
Adam Ramouni, General Sales Mgr

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Design, development, and manufacture of instrumentation for dynamic vehicle testing and other applications that require the precision measurement of variables including speed, distance, height and angle

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

Cosworth Technology, Inc

41000 Vincenti Court, Novi, MI 48375

ph: 248.471.5000 • fx: 248.471.3680 • www.cosworth-technology.com

07/2002

PARENT ORGANIZATION

Cosworth Technology, Inc

PRINCIPALS

Jonathan Hurden, US Operations Dir

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Calibration engineers

Diagnostic engineers

Project engineers

Software engineers

Technicians/diagnostic automotive

R&D ACTIVITIES

Engineering, testing and product development

PRODUCTS

Engine engineering, installation systems, electronic systems applications, emissions and drivability development and on-board diagnostics

FACILITY DESCRIPTION

Recently added a vehicle emission testing laboratory. Associated with the emissions laboratory are controlled soak areas, a prototype shop and customer work areas

OTHER SERVICES

Work on products for others

DaimlerChrysler Corporation

1000 Chrysler Drive, Auburn Hills, MI 48326

ph: 248.576.5741 • fx: 248.576.4742 • www.dcx.com

07/2002

PARENT ORGANIZATION

DaimlerChrysler Corp

PRINCIPALS

Dieter Zetsche, President, CEO

Bernard I Robertson, Sr VP Engineering Technologies, Regulatory Affairs

Richard O Schaum, Executive VP

Product Development, Quality

Thomas J Freeman, VP Advanced Product Design Strategy

TOTAL EMPLOYMENT

Not reported

PERCENT EMPLOYMENT R&D

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research, engineering, testing and product development

PRODUCTS

Design, prototype, and engineer products for DaimlerChrysler vehicles

FACILITY DESCRIPTION

Includes: powertrain test facility, wind tunnel, road simulators and emissions test facilities

OTHER SERVICES

No external services

ADDITIONAL INFORMATION

DaimlerChrysler has extensive R&D capabilities focused on applied research and product development within the company. For further information contact DaimlerChrysler at the phone number listed above

Defiance Testing & Engineering

950 Maplelawn Drive, Troy, MI 48084
ph: 248.458.5900 • fx: 248.458.5901 • www.defiancetest.com

07/2002

PARENT ORGANIZATION

Gentek

PRINCIPALS

Clive Spackman, VP, General Mgr

TOTAL EMPLOYMENT

200

AUTOMOTIVE R&D SPENDING

90%

ECONOMIC ACTIVITY 2001

\$38 Million

PROFESSIONAL STAFF

Engineers: 60
(BS: 27, MS: 25, PE: 8)
Technicians: 100

R&D ACTIVITIES

Block cycle and real time simulation testing, fatigue durability, safety, noise and sound quality evaluations, data acquisition, environmental and CAE

PRODUCTS

Component to full vehicle, car, light truck, heavy truck and off highway chassis, bumpers, suspension and steering, electrical components and systems, body structure and closures, powertrain and exhaust interior

FACILITY DESCRIPTION

A2LA and ISO guide 17025 certified, 270,000 sq ft of facilities. Structural test lab using primarily hydraulic actuators

OTHER SERVICES

Provide service at our facility or at the customers location

Delphi Automotive Systems Technical Center

12501 E Grand River Avenue, Brighton, MI 48116
ph: 810.494.4492 • fx: 810.494.4421

07/2002

PARENT ORGANIZATION

Delphi Corp

PRINCIPALS

Matthew M Henry, Chief Engineer

TOTAL EMPLOYMENT

406

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not Reported

PROFESSIONAL STAFF

Not Reported

R&D ACTIVITIES

Applied research, testing, engineering and product development

PRODUCTS

Engine management, chassis systems, passenger protection, brakes, steering, and power doors

FACILITY DESCRIPTION

Model shop, electronics lab, instrumentation lab, vehicle disassembly and automotive cold box

OTHER SERVICES

Consulting. Facilities available for use by others

Delphi Corporation

5725 Delphi Drive, Troy, MI 48098
ph: 248.813.2554 • fx: 248.813.2499 • www.delphiauto.com

07/2002

PARENT ORGANIZATION

Delphi Corp

PRINCIPALS

Dr Andrew Brown, Dir Engineering
Dr Tony Lee, Dir Global R&D, Technology Leveraging

TOTAL EMPLOYMENT

Michigan: 18,000

AUTOMOTIVE R&D SPENDING

90%

ECONOMIC ACTIVITY 2001

\$26.1 Billion

PROFESSIONAL STAFF

Technical professionals: 2,500

R&D ACTIVITIES

Basic and applied research, testing, engineering and product development

PRODUCTS

Automotive systems, components and modules (chassis, thermal systems, steering, connection systems, electronics and engine management)

FACILITY DESCRIPTION

Mechanical lab, model shop and electronics lab

OTHER SERVICES

No external services

Denso International America Inc

24777 Denso Drive, PO Box 5133, Southfield, MI 48086
ph: 248.350.7500 • www.globaldenso.com

07/2002

PARENT ORGANIZATION

Denso

PRINCIPALS

Doug Patton, Sr VP T/C

TOTAL EMPLOYMENT

Southfield: 499 (168 in labs)

AUTOMOTIVE R&D SPENDING

10%

ECONOMIC ACTIVITY 2001

\$4 Billion

PROFESSIONAL STAFF

Engineers: 130
Technicians: 32
Office Support: 6

R&D ACTIVITIES

Product development in the areas of climate control products, fuel pumps and electronic displays. Testing is

conducted for Denso's product line at the component, system and vehicle level

PRODUCTS

Climate control systems, engine controls and sensors, starter motors, alternators, accessory drive motors, telematics systems, display and information products, gasoline and diesel fuel handling systems, safety system items and related products

FACILITY DESCRIPTION

Vehicle test capabilities include: a full size anechoic chamber, emission test chamber, two engine dyno cells, high temp chamber, high/low temp chamber, climatic wind tunnel, component and system bench test capabilities, materials lab, EMC component chamber, vibration test capabilities, BSR chamber, a full machine shop and rapid modeling capabilities. 177,000 sq ft facility

OTHER SERVICES

No external services

Donnelly Corporation

49 W Third Street, Holland, MI 49423
ph: 616.786.7000 • fx: 616.786.6034 • www.donnelly.com

07/2002

PARENT ORGANIZATION

Donnelly Corp

PRINCIPALS

Dwane Baumgardner, Chairman, CEO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Developing, designing/producing electronics hardware/software and exterior systems

PRODUCTS

Automotive mirrors, vision optics/imaging, thin film coating/electrochromics, precision glass fabrication, injection molding, encapsulation, adhesion and packaging technologies

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

Dow Automotive

1250 Harmon Road, Auburn Hills, MI 48326
Phone: 248.391.6300 • fx: 248.391.6417 • www.dow.com/automotive

07/2002

PARENT ORGANIZATION

Dow Chemical Co

PRINCIPALS

Lawrence A Denton, President
Mike Heather, Dir Global R&D

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers
Materials scientists

R&D ACTIVITIES

Basic and applied research, engineering, testing and product development

PRODUCTS

Plastics, adhesives, sealants, plastics-enhanced products, and body engineered systems for the global automotive industry. Engineering capabilities include: modularization, CAD/CAE, finite element analysis, design optimization through tool and prototype development, processing methodology selection mold-filling analysis. Occupant safety testing

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

In-house testing and validation, along with program and supply-chain management expertise (including: equipment selection and processing method recommendations)

Dow Corning Corp

47799 Halyard Drive, Suite 77, Plymouth, MI 48170

ph: 734.454.2000 • fx: 734.454.0216 • www.dowcorning.com/content/auto

07/2002

PARENT ORGANIZATION

Dow Corning Corp

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Application engineering, basic and applied research

PRODUCTS

Chemical products for automotive applications including: adhesives, protection materials, sealing and gasketing materials and torque transfer fluids

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Not reported

DuPont Automotive

950 Stephenson Highway, Troy, MI 48083

ph: 800.533.1313 • www.dupont.com/automotive

07/2002

PARENT ORGANIZATION

DuPont

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers

R&D ACTIVITIES

Basic/applied materials research and engineering

PRODUCTS

Materials for powertrain, fuel, electrical/electronics, body interior, coatings, body exterior and safety glass

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Not reported

Dura Automotive Systems, Inc

2791 Research Drive, Rochester Hills, MI 48309

ph: 248.299.7202 • www.duraauto.com

07/2002

PARENT ORGANIZATION

Dura Automotive Systems, Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

200

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$2 Billion

(No manufacturing at this location)

PROFESSIONAL STAFF

Engineering: 98

Technicians: 10

R&D ACTIVITIES

Applied research, testing and advanced product development

PRODUCTS

Park brakes, pedals, jacks, tire carriers, window systems—hood hinges, hood latches and shifters

FACILITY DESCRIPTION

Office, electronics lab, mechanical lab and fabricating area

OTHER SERVICES

No external services

Durr Industries, Inc

40600 Plymouth Road, Plymouth, MI 48170

ph: 734.459.6800 • fx: 734.459.5837 • www.durr.com

07/2002

PARENT ORGANIZATION

Durr Industries, Inc

PRINCIPALS

Joseph M Klobucar, Sr Engineering Mgr, R&D

TOTAL EMPLOYMENT

200

AUTOMOTIVE R&D SPENDING

90%

ECONOMIC ACTIVITY 2001

\$200 Million

PROFESSIONAL STAFF

Chemist: 1

CFD engineer: 1

R&D engineer: 2

R&D ACTIVITIES

Applied research and product development

PRODUCTS

Vehicle finishing equipment/systems, spray booths, bake ovens and paint circulation systems

FACILITY DESCRIPTION

Test spray booth, test oven, powder paint lab and liquid paint test lab

OTHER SERVICES

We cooperate with other companies involved in automotive finishing

Dynamic Corporation

2565 Van Ommen Drive, Holland, MI 49424
ph: 616.399.2200 • www.dynamicinc.com

07/2002

PARENT ORGANIZATION

Dynamic Realty, Inc

PRINCIPALS

Jack Feddema, Vice President (Holland)
Ram Atwood, Vice President (Auburn Hills)
Steve Connelly, Vice President (Saginaw)

TOTAL EMPLOYMENT

120

AUTOMOTIVE R&D SPENDING

90%

ECONOMIC ACTIVITY 2001

\$10 Million

PROFESSIONAL STAFF

CAD-CAM specialists: 8
Engineers: 52
Techs: 30

R&D ACTIVITIES

Product development, testing and prototyping

PRODUCTS

Safety restraints, steering systems, suspension-design and prototyping, axle design and prototyping, fuel systems engineering and prototyping

FACILITY DESCRIPTION

Holland—A2LA accredited inspection lab;
Saginaw—Product development and testing with electronics;
Auburn Hills—QA 9000 registered class-A prototype facility

OTHER SERVICES

Consulting and sub-contract

Eaton Innovation Center

26201 Northwestern Highway, Southfield, MI 48076
ph: 248.354.2844 • fx: 248.208.2018 • www.eaton.com

07/2002

PARENT ORGANIZATION

Eaton Corp

PRINCIPALS

Craig A Black, VP, Chief Technology Officer

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design engineers
Materials scientists
Metallurgists
Stress analysts

R&D ACTIVITIES

Basic/applied research and product development

PRODUCTS

Engine air management systems, power train and specialty controls

FACILITY DESCRIPTION

Physicochemical/mechanical testing lab for monotonic and fatigue testing of materials, components and assemblies

OTHER SERVICES

Not reported

Emhart Fastening Teknologies

PO Box 868, Mount Clemens, MI 48046
ph: 586.949.0440 • fx: 586.949.0443 • www.emhart.com

07/2002

PARENT ORGANIZATION

Emhart Fastening Teknologies

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers

R&D ACTIVITIES

Product engineering

PRODUCTS

Fabric, insulation fastener/fastening systems for vehicles and components

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

No external services

Entela Inc

3033 Madison Avenue, Grand Rapids, MI 49458
ph: 616.247.0515 • fx: 616.247.7527 • www.entela.com

07/2002

PARENT ORGANIZATION

Entela Inc

PRINCIPALS

Kim Phillipi, President, CEO
Tom Kladder, CFO, VP Finance
Sam DeMarco, VP Marketing
Alex Porter, Business Development Mgr

TOTAL EMPLOYMENT

190

AUTOMOTIVE R&D SPENDING

70%

ECONOMIC ACTIVITY 2001

\$25 Million

PROFESSIONAL STAFF

Engineers: 38
Project/program managers: 20
Technicians: 15

R&D ACTIVITIES

Product development, engineering, design candidate evaluation, testing, accelerated testing, materials evaluation and failure analysis

PRODUCTS

Engineering and testing services, materials, interior components and systems, electronics, in-vehicle entertainment, HVAC, power distribution, batteries, lighting and glass

FACILITY DESCRIPTION

Laboratories include: materials lab, product test lab, electronics lab, EMC lab, test fixture lab and performance test lab

OTHER SERVICES

Public training

FANUC Robotics North America Inc

3900 W Hamlin Road, Rochester Hills, MI 48309
ph: 248.377.7570 • fx: 248.276.4133 • www.fanucrobotics.com

07/2002

PARENT ORGANIZATION

FANUC Robotics North America Inc

PRINCIPALS

Rick Schneider, President, CEO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Application engineers

R&D ACTIVITIES

Applied engineering and design engineering

PRODUCTS

Robots and robotic systems, software, controls and vision products that aid in the development of robotic systems

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Design and implement a robotic solution to enhance productivity and profitability

Fasco DC Motors

402 E Haven Street, Eaton Rapids, MI 48827
ph: 517.663.2161 • fx: 517.663.1797 • www.fasco.com

07/2002

PARENT ORGANIZATION

Fasco DC Motors

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Application engineers
Design engineers

R&D ACTIVITIES

Applied engineering and design engineering

PRODUCTS

FHP motors, blowers and gear motors

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on projects for others

FCI Automotive

17197 N Laurel Park Drive, Suite 400, Livonia, MI 48152
ph: 800.303.3577 • fx: 734.462.2058 • www.fciconnect.com

07/2002

PARENT ORGANIZATION

FCI Automotive

PRINCIPALS

André Louin, Sr VP, General Mgr

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Application engineers

R&D ACTIVITIES

Engineering and applied research

PRODUCTS

Interconnection systems for safety restraint applications, integrated packaging for electronic control units as well as miniaturized harness connectors. Terminal and interconnection systems for instrument panels, engine compartment, harness sectioning and electronic control units

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

No external services

Federal-Mogul

560 Avis Drive, Ann Arbor, MI 48108
ph: 734.930.1590 • www.Federal-Mogul.com

07/2002

PARENT ORGANIZATION

Federal-Mogul Corp

PRINCIPALS

Eduardo Matsuo, Chief Engineer
Keri Westbrooke, Dir Product Technology
Carmo Ribeiro, Product Mgr

TOTAL EMPLOYMENT

36

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not Reported

PROFESSIONAL STAFF

Not Reported

R&D ACTIVITIES

Testing, engineering and product development for heavy duty pistons

PRODUCTS

Piston development for heavy duty machinery

FACILITY DESCRIPTION

Engineering, design and testing labs for heavy duty engines

OTHER SERVICES

Projects for others

FEV Engine Technology, Inc

4554 Glenmeade Lane, Auburn Hills, MI 48326

ph: 248.373.6000 • www.fev.com

07/2002

PARENT ORGANIZATION

FEV Motorentechnik GmbH

PRINCIPALS

Gary W Rogers, CEO

Robert J Last, Dir Marketing, IT

TOTAL EMPLOYMENT

160

AUTOMOTIVE R&D SPENDING

80%

ECONOMIC ACTIVITY 2001

Not Reported

PROFESSIONAL STAFF

Project engineer: 60

Sr engineer/prog mgr: 10

R&D ACTIVITIES

Engineering design and prototyping services for advanced gasoline, diesel and alternative-fueled combustion engines, fuel cell development, engine integration and in-vehicle calibration services

PRODUCTS

Advanced gasoline, diesel, and alternative-fueled combustion engines, engine integration and in-vehicle calibration testing services

FACILITY DESCRIPTION

Engine and vehicle design, testing and development labs

OTHER SERVICES

Support to customers in the design, prototyping and development

First Technology Automotive and Special Products

28411 Northwestern Highway, Southfield, MI 48034

ph: 248.353.6200 • fx: 248.353.8333 • www.ifirsttech.com

07/2002

PARENT ORGANIZATION

First Technology PLC

PRINCIPALS

Not Reported

TOTAL EMPLOYMENT

Not Reported

AUTOMOTIVE R&D SPENDING

Not Reported

ECONOMIC ACTIVITY 2001

Not Reported

PROFESSIONAL STAFF

Design engineers

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Safety and comfort products, automotive electronics, control devices and precision ceramic components

FACILITY DESCRIPTION

Not Reported

OTHER SERVICES

No external

Ford Motor Company

One American Road, Dearborn, MI 48126

ph: 313.322.3000 • www.ford.com

07/2002

PARENT ORGANIZATION

Ford Motor Co

PRINCIPALS

William Clay Ford, Jr, CEO
Gerhard Schmidt, VP Research
Chris P Theodore, North American
Product Development,
Alex P Ver, Advanced Manufacturing Engineering

TOTAL EMPLOYMENT

Not reported

PERCENT EMPLOYMENT R&D

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research, engineering, testing and product development

PRODUCTS

Design, prototype, and engineer products for Ford Motor Company vehicles

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

No external services

ADDITIONAL INFORMATION

Ford Motor Company has extensive R&D capabilities focused on applied research and product development within the company. For further information contact Ford at the phone number listed above

Freudenberg-NOK

47690 E Anchor Court, Plymouth, MI 48170

ph: 734.451.0020 • fx: 734.451.0043 • www.freudenberg-nok.com

07/2002

PARENT ORGANIZATION

Freudenberg-NOK

PRINCIPALS

Joseph Day, President, CEO
Dr Ted Duclos, CTO

TOTAL EMPLOYMENT

250

AUTOMOTIVE R&D SPENDING

30%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Chemists: 10
Engineers: 30
Technicians: 20

R&D ACTIVITIES

Advanced product/process development for sealing and vibration control components, component sub-system and vehicle testing

PRODUCTS

Powertrain sealing components, chassis sealing components and vibration control for both

FACILITY DESCRIPTION

Elastomer mixing and molding physical and environmental testing facilities. Adhesive development and chemical analytical capability

OTHER SERVICES

Chassis roll test facility available for use by others

Gates Automotive Technical Center (GATC)

2975 Waterview Drive, Rochester Hills, MI 48309
ph: 248.260.2300 • fx: 248.260.1040 • www.gates.com

07/2002

PARENT ORGANIZATION

Tomkins PLC

PRINCIPALS

John Bohenic, VP Technology, R&D

TOTAL EMPLOYMENT

120

AUTOMOTIVE R&D SPENDING

80%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 20
Research managers: 6
Research scientists: 30
(chemists and engineers)
Technicians: 20

R&D ACTIVITIES

Applied research in systems technology, composite science, material science, electro-mechanical drive systems and components. Material property, fatigue, and durability testing, analytical testing, and engine and vehicle testing and evaluation

PRODUCTS

Power Transmission systems including accessory and synchronous belt drive systems, transmission drives (CVT), motorcycle primary and secondary drives, and other industrial belt drive systems

FACILITY DESCRIPTION

Advanced analysis exists for system modeling as well as non-linear CAE to support composite science. Testing capabilities for polymers and metals, component function, performances, and durability. Complete system testing on engines, transmissions, and vehicles

OTHER SERVICES

Some services (engineering and analysis) are provided to customers for special advanced projects

General Motors Technical Center

30200 Mound Road, Warren, MI 48092
ph: 586.986.2502 • fx: 586.986.6347 • www.gm.com

07/2002

PARENT ORGANIZATION

General Motors

PRINCIPALS

Dr Lawrence D Burns, VP R&D, Planning

TOTAL EMPLOYMENT

Engineers and technicians: 8,000
(by the end of 2003)

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers
Technicians

R&D ACTIVITIES

Engineering, testing, product development and applied research

PRODUCTS

Design, prototype, and engineer products for General Motors vehicles

FACILITY DESCRIPTION

1.2 million sq ft facility, with a new 960,000 sq ft, eight-story tower currently under construction and slated to be completed late 2003

OTHER SERVICES

No external services

Gentex Corporation

600 N Centennial Street, Zeeland, MI 49464
ph: 616.772.1800 • fx: 616.772.7348 • www.gentex.com

07/2002

PARENT ORGANIZATION

Gentex Corp

PRINCIPALS

Fred Bauer, COB, CEO
Dennis Alexejun, VP North American
Automotive Marketing

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Chemists
Electrical engineers
Mechanical engineers
Research scientists

R&D ACTIVITIES

Basic/applied research, engineering and product development

PRODUCTS

Electro-optical products (products that employ sophisticated optical sensing devices and related electronic circuitry)

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

GKN Automotive

3300 University Drive, Auburn Hills, MI 48326
ph: 248.377.1200 • fx: 248.377.1370 • www.gknplc.com

07/2002

PARENT ORGANIZATION

GKN plc

PRINCIPALS

Ian Griffiths, Managing Dir Automotive Driveline

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Engineering

PRODUCTS

Velocity jointed half shafts and catalytic metal substrates

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Consulting and work on projects for others

Gonzalez Design Engineering

1610 E Highwood, Pontiac, MI 48340

ph: 248.745.1200 • fx: 248.745.1212 • www.gonzalez-group.com

07/2002

PARENT ORGANIZATION

Gonzalez Design Engineering

PRINCIPALS

James Fox, Dir Research

TOTAL EMPLOYMENT

900

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$112 Million

PROFESSIONAL STAFF

Engineers: 400

Technicians: 200

R&D ACTIVITIES

Basic and applied research, testing, engineering and product development

PRODUCTS

Welding assembly systems and robotics. Research in welding and joining body panels

FACILITY DESCRIPTION

Mechanical and electronics labs

OTHER SERVICES

Apply research to specific customer needs

Grand Haven Stamped Products (GHSP)

1250 S Beechtree Street, Grand Haven, MI 49417

ph: 616.842.5500 • fx: 616.844.7776 • www.ghsp.com

07/2002

PARENT ORGANIZATION

JSJ Corp

PRINCIPALS

Jerry Scott, President

Dan Fisher, VP Engineering

TOTAL EMPLOYMENT

600

AUTOMOTIVE R&D SPENDING

95%

ECONOMIC ACTIVITY 2001

\$134 Million

PROFESSIONAL STAFF

CAD Designers: 20

Engineers: 82

Technicians: 25

R&D ACTIVITIES

Product development and testing

PRODUCTS

Driver controls

FACILITY DESCRIPTION

Mechanical, electronics, model shop and finite element labs

OTHER SERVICES

Mechanical test lab does work for others

Greening Testing Laboratories, Inc

19465 Mount Elliott Avenue, Detroit, MI 48234
ph: 313.366.7160 • fx: 313.366.5415 • www.greeninginc.com

07/2002

PARENT ORGANIZATION

Greening Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Electronics engineers

R&D ACTIVITIES

Applied research, engineering, testing and product development

PRODUCTS

Test development, data analysis, and other methodologies for the transportation industries. Designs and manufacturing of special instrumentation including analog, digital and computer-based control systems

FACILITY DESCRIPTION

Has capabilities to simulate *in service* environments in the laboratory

OTHER SERVICES

Testing work for others

Guardian Automotive Products

23751 Amber Avenue, Warren, MI 48089
ph: 586.757.7800 • fx: 586.757.8329 • www.guardian.com

07/2002

PARENT ORGANIZATION

Guardian Industries Corp

PRINCIPALS

Jerry Wolf, Sr, Program Manager

TOTAL EMPLOYMENT

180

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers
Process engineers
Scientists
Technicians

R&D ACTIVITIES

Applied research, testing, engineering and product development

PRODUCTS

Automotive glass and plastic exterior trim components

FACILITY DESCRIPTION

Materials, mechanical and diagnostic labs

OTHER SERVICES

Consulting services

Hantech LLC

1150 Stephenson Highway, Troy, MI 48083
ph: 248.588.7670

07/2002

PARENT ORGANIZATION

Hantech LLC

PRINCIPALS

David D Duche, President

TOTAL EMPLOYMENT

13

AUTOMOTIVE R&D SPENDING

75%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Electrical engineers: 2

Mechanical engineers: 9

R&D ACTIVITIES

Manufacturing process development and engineering

PRODUCTS

Manufacturing assembly systems, materials joining and machining, equipment concept and feasibility studies, robot and work cell simulation

FACILITY DESCRIPTION

Engineering, simulation, CAD and CAE labs

OTHER SERVICES

Consulting, design, process and simulate projects for systems integrators

Hawtal Whiting Inc

41155 Technology Park Drive, Sterling Heights, MI 48314
ph: 810.726.3444 • fx: 810.726.3455 • www.hawtal.com

07/2002

PARENT ORGANIZATION

Wagon PLC

PRINCIPALS

Bob Valcke, COO

Mike Harrington, VP Engineering Programs

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design engineers

Multi-discipline engineers

R&D ACTIVITIES

Product design development and testing

PRODUCTS

Provision of: modeling, design/engineering, manufacturing feasibility, testing and prototype services

FACILITY DESCRIPTION

Styling/modeling studios, color/trim matching room and model shop. 50,000 sq ft facility

OTHER SERVICES

Consulting. Facility available for use by others

Hayes Lemmerz International, Inc

Technical Services

1600 W Eight Mile Road, Ferndale, MI 48220
ph: 248.399.9600 • fx: 248.399.3512 • www.hayes-lemmerz.com

07/2002

PARENT ORGANIZATION

Hayes Lemmerz International

PRINCIPALS

Daniel M. Sandberg, Vice President,
President Automotive Brake,
Powertrain Components

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers

R&D ACTIVITIES

Applied research, engineering, testing and product development

PRODUCTS

Wheels, brake components, powertrain components, and structural components for passenger cars, minivans, sport utility vehicles and light trucks. Rapid prototyping

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Testing laboratory services. Computer aided engineering (CAE) and process modeling, CAD and CAM

Hi-Lex Automotive Center

1055 W Square Lake Road, Troy, MI 48098
ph: 248.813.8317 • fx: 248.813.8433 • www.hi-lex.com

07/2002

PARENT ORGANIZATION

Hi-Lex Corp

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers

R&D ACTIVITIES

Applied research, engineering, testing and product development

PRODUCTS

Automotive and recreational electromechanical devices, control cables, window regulators, sunroof subassemblies and prototypes

FACILITY DESCRIPTION

Prototype facilities. Products can be thoroughly tested to determine durability and reliability. Environmental simulation chambers and noise testing in an anechoic room

OTHER SERVICES

No external services

HP Pelzer Automotive Systems

1175 Crooks Road, Troy, MI 48084
ph: 248.280.2500 • www.hppelzer.com

07/2002

PARENT ORGANIZATION

HP Chemie Pelzer GmbH, Whitten, Germany

Process engineers: 10

Test engineers: 4

PRINCIPALS

David Greeneisen, President, CEO

Clarence Peoples, VP R&D

R&D ACTIVITIES

Develop acoustic treatments for automobiles. Components using urethane foam, EVA, resonated fiber, tufted and needled carpet and other miscellaneous materials

TOTAL EMPLOYMENT

North America: 680

Troy: 65

PRODUCTS

Floor carpet, trunk trim, inner dash insulator, engine compartment insulators, wheel well insulators, various dampers, deadeners and absorbers

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

North America: \$72 Million

FACILITY DESCRIPTION

The headquarters facility in Troy. Acoustic test facility (4-wheel dynamometer and reverberation rooms) for evaluating designs

PROFESSIONAL STAFF

Acoustic engineers: 5

Materials engineers: 4

Product design engineers: 10

OTHER SERVICES

Contract acoustic testing

Husky Injection Molding Systems Ltd

45145 W Twelve Mile Road, Novi, MI 48377
ph: 248.735.6300 • fx: 248.735.6422 • www.husky.ca

07/2002

PARENT ORGANIZATION

Husky Injection Molding Systems Ltd

R&D ACTIVITIES

Applied research and engineering

PRINCIPALS

Trefor Jones, General Mgr

PRODUCTS

Global supplier of injection molding systems to the plastics industry. Injection molding technologies, support infrastructure and plant construction

TOTAL EMPLOYMENT

Not reported

FACILITY DESCRIPTION

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

OTHER SERVICES

Engineering consulting, plant audits, feasibility studies, factory planning studies, process mechanical design and integrated work cell design

PROFESSIONAL STAFF

Engineers

Hutchinson FTS

1835 Technology Drive, Troy, MI 48083
ph: 248.597.3646 • fx: 248.589.7730 • www.hutchinsonfts.com

07/2002

PARENT ORGANIZATION

Total Fina EIF

PRINCIPALS

Paul Campbell, President, CEO
Daniel F. Kiblawi, VP Engineering

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design, development and R&D engineers: 42

R&D ACTIVITIES

Applied research, product development and testing

PRODUCTS

Air conditioning fluid transfer components and assemblies

FACILITY DESCRIPTION

Mechanical lab, thermal lab, fluid mechanics lab and prototype fabrication lab

OTHER SERVICES

No external services

IEE Automotive

1121 Centre Road, Auburn Hills, MI 48236
ph: 248.373.9700 • www.iee.com

07/2002

PARENT ORGANIZATION

IEE Automotive

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied engineering center

PRODUCTS

Sensor technology (for seats and airbag deployment) detects when passenger is in a seat and the presence of child seat.

FACILITY DESCRIPTION

Electronics lab

OTHER SERVICES

Not reported

Inergy Automotive Systems

Technical Center

2585 W Maple Road, Troy, MI 48084
ph: 248.435.3300 • fx: 248.435.2504 • www.inergyautomotive.com

07/2002

PARENT ORGANIZATION

Inergy Automotive Systems

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Development engineers

R&D ACTIVITIES

Basic and applied research, testing, engineering, and product development

PRODUCTS

Integrated fuel systems—interface the performance of the fuel system with the vehicle engine management, diagnostics, chassis and exhaust systems

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Engineer, test and certify a system for a customer

Johnson Controls Automotive Systems Group

49200 Halyard, Plymouth, MI 48170
ph: 734.254.5000 • www.johnsoncontrols.com

07/2002

PARENT ORGANIZATION

Johnson Controls, Inc

PRINCIPALS

Rande Somma, North American President
Bill Fluherty, VP New Product Strategy,
Industrial Design

TOTAL EMPLOYMENT

1700

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Design, engineering, validation and systems integration

PRODUCTS

Automotive interiors and batteries

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

No external services

Johnson Matthey Testing

12600 Universal Drive, Taylor, MI 48180

ph: 734.946.9856 • fx: 734.946.8312 • www.jmcsd.com/html/automotive_-_north_america.html

07/2002

PARENT ORGANIZATION

Johnson Matthey

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Emissions engineers

R&D ACTIVITIES

Basic/applied research, testing and engineering

PRODUCTS

Catalysts for vehicle exhaust emission control.
Apply catalysis in controlling emissions from both petrol and diesel engine vehicles

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Not reported

Kaiser Aluminum

26913 Northwestern Highway, Southfield, MI 48034

ph: 248.352.4630 • fx: 248.352.4635 • www.kaiser.com

07/2002

PARENT ORGANIZATION

Kaiser Aluminum

PRINCIPALS

Richard Larimer, VP Marketing, Sales
Doug Richman, VP Engineering

TOTAL EMPLOYMENT

18,000

AUTOMOTIVE R&D SPENDING

20%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Material/alloy development and process development

PRODUCTS

Aluminum products

FACILITY DESCRIPTION

Metallurgy lab, casting extrude, forge R&D and small process operations

OTHER SERVICES

Work with OEMs, Tier 1 and 2 suppliers to develop specific products

Karmann USA Inc

17197 N Laurel Park Drive, Suite 537, Livonia, MI 48152
ph: 734.542.0106 x369 • www.karmannusa.com

07/2002

PARENT ORGANIZATION

Wilhelm Karmann GmbH

PRINCIPALS

Dr Hans-Joachim Emmelmann, CEO
Tim Olind, COO
Stephen Chesna, Dir Business Operations
Mark B. Stevens, Dir Sales, Marketing

TOTAL EMPLOYMENT

50

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$4.1 Million

PROFESSIONAL STAFF

Engineers
Designers
Technicians

R&D ACTIVITIES

Applied research, testing, engineering, and/or product development on automotive bodies and roof systems

PRODUCTS

Body and convertible top design, engineering, testing and development

FACILITY DESCRIPTION

Building a new 38,000 sq ft building in Plymouth, MI which will have design, engineering, testing and shop facilities. Move-in November, 2002

OTHER SERVICES

Some consulting work. Some facilities are shared with our current joint venture partner (ASC)

Koyo

North American Engineering & Technical Center

47771 Halyard Drive, Plymouth, MI 48170
ph: 734.454.1500 • fx: 734.454.4076 • www.koyusa.com

07/2002

PARENT ORGANIZATION

Koyo Seiko

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Applications engineers

R&D ACTIVITIES

Applied research and engineering

PRODUCTS

Ball/roller bearings and steering systems

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

Lear Corporation

Technical Division

21557 Telegraph Road, Southfield, MI 48034
ph: 248.447.1680 • fx: 248.447.5926 • www.lear.com

07/2002

PARENT ORGANIZATION

Lear Corp

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

200

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research

PRODUCTS

Total vehicle interior systems

FACILITY DESCRIPTION

Electronics, mechanical, plastics, fabric and total interior prototyping

OTHER SERVICES

Full service to OEM customers from design development to production parts

Loctite Corporation

Automotive Technology Center

2455 Featherstone Road, Auburn Hills, MI 48326
ph: 248.364.4700 • www.automotive@locitite.com

07/2002

PARENT ORGANIZATION

Henkel

PRINCIPALS

Charles J Evans, VP, General Mgr
Allen D Forgach, Dir Engineering

TOTAL EMPLOYMENT

20

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$40 Million

PROFESSIONAL STAFF

Engineers: 6
Technicians: 4

R&D ACTIVITIES

Application engineering and technical service

PRODUCTS

Adhesive and sealant applications

FACILITY DESCRIPTION

Application and testing labs

OTHER SERVICES

Work on projects for others

Lotus Engineering, Inc

1255 N Main Street, Ann Arbor, MI 48104
ph: 734.995.2544 • fx: 734.995.9301 • www.lotusengineeringinc.com

07/2002

PARENT ORGANIZATION

Group Lotus, PLC

PRINCIPALS

John Briggs, Vice President
Tim Holland, Vice President
Sumax Cobb, Vice President

TOTAL EMPLOYMENT

60

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$8 Million

PROFESSIONAL STAFF

Engineers: 20
Technicians: 26

R&D ACTIVITIES

Applied research, testing and product development

PRODUCTS

Produce speciality automobiles
(Tier .5 supplier)

FACILITY DESCRIPTION

Mechanical lab with design area and testing facility

OTHER SERVICES

Work on products for others

Magna Automotive Testing

19868 Haggerty Road, Livonia, MI 48152
ph: 734.432.4256 • fx: 734.591.9207 • www.magnaautomotivetesting.com

07/2002

PARENT ORGANIZATION

Intier Automotive Seating of America, Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Quality control engineers

R&D ACTIVITIES

Testing and engineering

PRODUCTS

Safety testing, environmental for-post road simulation, structural testing, instrumentation, and FEA fatigue simulation

FACILITY DESCRIPTION

Contract test facility specializing in complete interior and body testing for vehicle manufacturers and Tier 1 suppliers

OTHER SERVICES

Interiors and body testing

Magneti Marelli North America

1389 Wheaton Avenue, Suite 800, Troy, MI 48083

ph: 888.297.1855

07/2002

PARENT ORGANIZATION

Magneti Marelli SPA

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

23

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$1 Million

PROFESSIONAL STAFF

Design engineers: 2

Product engineers: 3

Ride development engineers: 4

R&D ACTIVITIES

Product design development and benchmarking

PRODUCTS

Shock absorbers

FACILITY DESCRIPTION

Dynamic, prototype and mechanical labs

OTHER SERVICES

Support services for OEMs

MAHLE, Inc

23030 Haggerty Road, Farmington Hills, MI 48335

ph: 248.305.8200 • fx: 248.305.8600 • www.mahleinc.com

07/2002

PARENT ORGANIZATION

MAHLE GmbH

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Numerical simulation engineers

Application engineers

R&D ACTIVITIES

Product testing and simulation measuring

PRODUCTS

Pistons and related components, filter systems and valve train systems

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Numerical simulation of power cell system components and failure analysis

MANN+HUMMEL AUTOMOTIVE, Inc (AUUS)

6400 Sprinkle Road, Portage, MI 49002
ph: 616.329.3900 • fx: 616.329.5000 • www.mannhummelauto.com

07/2002

PARENT ORGANIZATION

Filterwerk MANN + HUMMEL GmbH

PRINCIPALS

Claude Mathieu
Charles Vaillant

TOTAL EMPLOYMENT

280

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$50 Million

PROFESSIONAL STAFF

Design engineers: 10
FEA/CAE engineers: 2
Release engineers: 3
Testing engineers: 2

R&D ACTIVITIES

Product design development (FEA/CAE) and testing

PRODUCTS

Plastic intake manifold, air filter systems and fluid filter systems

FACILITY DESCRIPTION

Design and development office, testing lab and prototype shop

OTHER SERVICES

No external services

McLaren Performance Technologies

32233 W Eight Mile Road, Livonia, MI 48152
ph: 248.477.6240 • fx: 248.477.3349 • www.mclarenengines.com

07/2002

PARENT ORGANIZATION

McLaren Performance Technologies

PRINCIPALS

Steven Rossi, President, CEO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Mechanical engineers

R&D ACTIVITIES

Engineering services

PRODUCTS

Engine technology development and prototypes

FACILITY DESCRIPTION

16 dynamometer test cells

OTHER SERVICES

Product development and engine testing

MDE International, Inc

G-4033 S Center Road, Burton, MI 48519

ph: 810.743.5980 • www.mdeintl.com

PARENT ORGANIZATION

MDE International, Inc

PRINCIPALS

Jeffrey B Koch, President

Richard Benoit, Dir New Business Development

Bob Mills, Manager

TOTAL EMPLOYMENT

MI office: 40

Company total: 250

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Testing for the transportation industry, utilizing public road surfaces and controlled proving ground facilities

PRODUCTS

Reliability, durability and OBDII testing of vehicles and components

FACILITY DESCRIPTION

Automotive testing facility used for inspection and service of test vehicles. Offices are located in Burton, MI; Bemidji, MN; Corpus Christi, TX; Denver, CO; Las Vegas, NV; Yucca, AZ

OTHER SERVICES

Testing services for the transportation industry. Our facilities are available for the use by others

Mechanical Simulation Corporation

709 W Huron, Ann Arbor, MI 48103

ph: 734.668.2930 • www.carsim.com

PARENT ORGANIZATION

Mechanical Simulation Corp

PRINCIPALS

Steve Hann, President

Tom Gillespie, Vehicle Dynamics

Mike Sayers, Head of Engineering

TOTAL EMPLOYMENT

10

PERCENT EMPLOYMENT R&D

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Sales & marketing engineers: 2

Software development (PhD): 3

Software support engineers: 3

Vehicle dynamics (PhD): 2

R&D ACTIVITIES

Applied research and product development

PRODUCTS

Vehicle dynamics simulation software, active safety electronic control systems—vehicle stability/rollover, ABS, TCS, 4WS and active suspensions

FACILITY DESCRIPTION

Software development facility and vehicle dynamic simulation lab

OTHER SERVICES

Consulting and custom software development

Metaldyne

47603 Halyard Drive, Plymouth, MI 48170
ph: 734.207.6200 • fx: 734.207.6500 • www.metaldyne.com

07/2002

PARENT ORGANIZATION

Metaldyne

PRINCIPALS

Tim Leuliette, Chairman, President, CEO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Mechanical engineers

R&D ACTIVITIES

Product development and testing

PRODUCTS

Manufacture and integrate a wide range of metal-based components, assemblies and modules for chassis, engine, driveline and transmission applications

FACILITY DESCRIPTION

Specialized labs for: materials engineering, design, dynamometer, structure and fatigue testing, noise vibration/harshness and rubber design

OTHER SERVICES

Not reported

MGA Research Corp

446 Executive Drive, Troy, MI 48083
ph: 248.577.5001 • fx: 248.577.5025 • www.mgaresearch.com

07/2002

PARENT ORGANIZATION

MGA Research Corp

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Electrical engineers
Mechanical engineers
Software engineers

R&D ACTIVITIES

Safety related testing

PRODUCTS

Component, safety and durability testing services

FACILITY DESCRIPTION

Component-level, bench-top systems through full scale crash and accelerator sled facilities

OTHER SERVICES

Product testing

Michigan Rubber Products, Inc

1200 Eighth Avenue, Cadillac, MI 49601

ph: 231.775.1316 • fx: 231.775.3160 • www.Michigan-Rubber.com

PARENT ORGANIZATION

Applied Tech Products

PRINCIPALS

Dennis Brovont, President

Emilio Chuey, Director

John Lund, Vice President

TOTAL EMPLOYMENT

400

AUTOMOTIVE R&D SPENDING

98%

ECONOMIC ACTIVITY 2001

\$51 Million

PROFESSIONAL STAFF

Engineers: 12

Scientists: 3

Technicians: 5

R&D ACTIVITIES

Basic and applied research, testing, engineering and product development

PRODUCTS

Rubber components and assemblies to support multiple automotive systems such as air induction systems, AIR emissions systems, NVH and sealing applications

FACILITY DESCRIPTION

Chemical lab for elastomer compounds development, mechanical lab for testing and evaluation, and a model shop for process and application-related development

OTHER SERVICES

Work on projects for others

Michigan Scientific Corp (MSC)

321 E Huron Street, Milford, MI 48381

ph: 248.685.3939 • www.michsci.com

PARENT ORGANIZATION

MI Scientific Corp

PRINCIPALS

Hugh Larsen

John Peterson

Kent Larsen

Mike Castiglione

TOTAL EMPLOYMENT

35

AUTOMOTIVE R&D SPENDING

70%

ECONOMIC ACTIVITY 2001

Charlevoix and Milford: \$5 Million
(combined sales)

PROFESSIONAL STAFF

Engineers: 25

Machinists: 10

Scientists: 2

Technicians: 20

R&D ACTIVITIES

Testing and engineering

PRODUCTS

Engines, chassis, axles/shafts, brakes, transmissions—engineering measurements

FACILITY DESCRIPTION

Equipment to measure forces, temperature, pressure, acceleration, electrical measurements

OTHER SERVICES

Consult for other companies and work on projects for others

Mitsubishi Electric Automotive America

15603 Centennial Drive, Northville, MI 48167
ph: 734.453.6200 • fx: 734.453.6211 • www.meaa-mea.com

07/2002

PARENT ORGANIZATION

Mitsubishi Electric Corp

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Application engineers
Electronics engineers

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Powertrain products, body and chassis products
and in-vehicle entertainment systems

FACILITY DESCRIPTION

117,000 sq ft operational space

OTHER SERVICES

Work on products for others

Mitsubishi Motor Research & Development of America, Inc

4300 Varsity Drive, Ann Arbor, MI 48108
ph: 734.973.4441 • fx: 734.973.4469

07/2002

PARENT ORGANIZATION

Mitsubishi Motor Corp

PRINCIPALS

Dennis Gore, Executive Dir, Deputy General Mgr

TOTAL EMPLOYMENT

73

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Professionals: 19
Technicians: 8

R&D ACTIVITIES

Testing, engineering and product development

PRODUCTS

Fuel emissions, safety, HVAC and whole vehicle
evaluation

FACILITY DESCRIPTION

Testing and design engineering center

OTHER SERVICES

No external services

Modern Body Engineering Corporation

1900 E Fourteen Mile Road, Madison Heights, MI 48071

ph: 248.588.8080 • www.modernbody.com

PARENT ORGANIZATION

Modern Body Engineering Corp

PRINCIPALS

V Reo Campian, President

Jonathan Campian, Vice President

TOTAL EMPLOYMENT

15

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 12

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Develop and create tool dies

FACILITY DESCRIPTION

Model shop

OTHER SERVICES

Work on projects for others

Molex Automotive

2025 Taylor Road, Auburn Hills, MI 48236

ph: 248.371.9700 • fx: 248.371.9707 • www.molex.com

PARENT ORGANIZATION

Molex Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Engineering, product development, testing and validation

PRODUCTS

Automotive electrical connectors and interconnect systems

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

MSX

Vehicle Development and Engineering Center

275 Rex Boulevard, Auburn Hills, MI 48326
ph: 248.299.1000 • www.msxi.com

07/2002

PARENT ORGANIZATION

MSX International, Inc

PRINCIPALS

Mike Presser, Sr VP Engineering
Gerry Bryce, VP Product Engineering
Mike Evans, Dir Shops, Vehicle Services

TOTAL EMPLOYMENT

200

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$12 Million

PROFESSIONAL STAFF

Program/engineering management: 40
Product designers/management: 60
Shop test/vehicle development technicians: 60
Vehicle prototype/special vehicle technicians: 40

R&D ACTIVITIES

Full vehicle product development; concepts through prototype and validation

PRODUCTS

Vehicle body and chassis development services (engineering, supporting system and vehicle performance validation)

FACILITY DESCRIPTION

Vehicle development center includes model and tool shop, prototype, build and fabrication facilities

OTHER SERVICES

Engineering consulting, product development and program management

Munro & Associates, Inc

900 Wilshire Drive, Troy, MI 48084
ph: 248.362.5110 • www.munroassoc.com

07/2002

PARENT ORGANIZATION

Munro and Associates, Inc

PRINCIPALS

Sandy Munro, President

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineering consultants

R&D ACTIVITIES

Engineering consulting

PRODUCTS

Help manufacturers transform their organizations through the implementation of a concurrent engineering strategy

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Consulting

National Steel Corporation

Technical Research Center

1745 Fritz Drive, Trenton, MI 48183
ph: 734.676.8080 • fx: 734.676.2030 • www.nationalsteel.com

PARENT ORGANIZATION

National Steel Corp

PRINCIPALS

Dr Stephen Denner, VP Research, Technology

TOTAL EMPLOYMENT

3,700

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers
Scientists

R&D ACTIVITIES

Basic and applied research, design analysis, engineering feasibility and product development

PRODUCTS

Activities are principally designed to emphasize and address the manufacturability (formability, joinability and paintability) and performance (corrosion behavior, dent performance and structural integrity) of steel

FACILITY DESCRIPTION

1,100-acre complex, housing mechanical testing laboratory, failure analysis laboratory and dent testing equipment

OTHER SERVICES

Consult with suppliers and OEMs

Nissan Technical Center North America

39001 Sunrise Drive, Farmington Hills, MI 48331
ph: 248.488.4123 • fx: 248.488.3901 • www.nissandriven.com

PARENT ORGANIZATION

Nissan Motor Co

PRINCIPALS

Mitsuhiko Yamashita, President

TOTAL EMPLOYMENT

572

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

CAD/Technicians: 83
Engineers: 336
Professionals: 40

R&D ACTIVITIES

Basic and applied research, testing, engineering and product development

PRODUCTS

Wide variety of components and complete vehicles

FACILITY DESCRIPTION

Automotive research, development and testing facility

OTHER SERVICES

No external services

North American Lighting, Inc

38900 Hills Tech Drive, Farmington Hills, MI 48334

ph: 248.553.6408 • www.nal.com

07/2002

PARENT ORGANIZATION

Koito Manufacturing Co, Ltd

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design engineers

R&D ACTIVITIES

Design engineering, program management and product development

PRODUCTS

Automotive lighting products

FACILITY DESCRIPTION

Technical center—model shop

OTHER SERVICES

In-house styling department acts as a conduit between customer vehicle stylists and NAL lighting engineers

NSK Corp

3861 Research Park Drive, Ann Arbor, MI 48106

ph: 734.761.9500 • fx: 734.761.9508 • www.us.nsk.com

07/2002

PARENT ORGANIZATION

NSK Corp

PRINCIPALS

Ollie Martins, President, CEO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Application engineers

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Anti-friction bearings, precision machinery/parts, mechatronics and clutches

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

Ogihara America Corporation

1480 W McPherson Park Drive, Howell, MI 48843
ph: 517.548.4900 • fx: 517.548.6036 • www.ogihara.com

PARENT ORGANIZATION

Ogihara Corp, Japan

PRINCIPALS

Tokio Ogihara, President
Larry Snowden, Dir Engineering
Richard Burden, Mgr Engineering, New Technology

TOTAL EMPLOYMENT

456

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$167 Million

PROFESSIONAL STAFF

CAD/CAM/CAE: 7
Die engineers: 6
Manufacturing engineers: 6
Welding engineers: 5

R&D ACTIVITIES

New technology development

PRODUCTS

Class A and interior body panels

FACILITY DESCRIPTION

Stamping plant, tool and die facility

OTHER SERVICES

Consulting and new technology testing

OMG Corp

2347 Commercial Drive, Auburn Hills, MI 48326
ph: 248.340.1040 • www.automotivecatalysts.com

PARENT ORGANIZATION

OMG, Inc

PRINCIPALS

Bob White, Lab Mgr

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research catalyst development testing

PRODUCTS

Emission control catalysts

FACILITY DESCRIPTION

Technical center, lab, marketing and sales

OTHER SERVICES

Catalyst testing and analysis

Paragon Laboratories, Inc

12649 Richfield Court, Livonia, MI 48150

ph: 734.462.3900

07/2002

PARENT ORGANIZATION

Paragon Laboratories, Inc

PRINCIPALS

Jerry ParmenTier, President

Thomas J Jonaitis, Petroleum Laboratory Mgr

Dale H Norton, Petroleum Analyst

TOTAL EMPLOYMENT

12

AUTOMOTIVE R&D SPENDING

50%

ECONOMIC ACTIVITY 2001

\$1.3 Million

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Analysis of fuels and lubricants

PRODUCTS

Testing/analysis of gasoline, diesels, alcohol-based fuels, bio-diesels and oils

FACILITY DESCRIPTION

Analytical chemistry laboratory

OTHER SERVICES

Provide chemical analysis of fluid powers

Perceptron

47827 Halyard Drive, Plymouth, MI 48170

ph: 734.414.6100 • fx: 734.414.4700 • www.perceptron.com

07/2002

PARENT ORGANIZATION

Perceptron

PRINCIPALS

Al Pease, Chairman, CEO

Kent Gilbert, VP Engineering

TOTAL EMPLOYMENT

140

AUTOMOTIVE R&D SPENDING

95%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

R&D technical staff: 45

R&D ACTIVITIES

Applied research, testing, engineering and product development

PRODUCTS

Automated quality measurement systems

FACILITY DESCRIPTION

Headquarters, manufacturing, research, development and testing labs

OTHER SERVICES

No external services

Peterson Spring

21200 Telegraph Road, Southfield, MI 48034
ph: 248.799.5400 • fx: 248.357.5874 • www.pspring.com

PARENT ORGANIZATION

Peterson American Corp

PRINCIPALS

Derek Saynor, VP Engineering
Ron Check, Product Engineering Mgr

TOTAL EMPLOYMENT

45

PERCENT EMPLOYMENT R&D

75%

ECONOMIC ACTIVITY 2001

\$110 Million

PROFESSIONAL STAFF

Engineers: 25
Scientists: 2
Technicians: 5

R&D ACTIVITIES

Basic and applied research, testing, engineering and product development

PRODUCTS

High-strength materials, metal forming, springs, clamps, pressings and drivetrain rings

FACILITY DESCRIPTION

Materials lab and dynamic testing lab

OTHER SERVICES

No external services

Pilot Industries, Inc

2319 Bishop Circle E, Dexter, MI 48130
ph: 734.426.4376 • fx: 734.426.8160 • www.pilotindustries.com

PARENT ORGANIZATION

Pilot Industries, Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design engineers
Manufacturing engineers
Quality control engineers
Scientists

R&D ACTIVITIES

Product development, applied research, engineering and testing

PRODUCTS

Prototypes, fuel/fluid handling systems and systems integration

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

POM Group

2350 Pontiac Road, Auburn Hills, MI 48236
ph: 248.409.7900 • fx: 248.409.7901 • www.pomgroup.com

07/2002

PARENT ORGANIZATION

POM Group

PRINCIPALS

Dr Jyoti Mazumder, CEO
Dwight M Morgan, President
Tim W Skszek, VP, Chief Engineer
Brian Ziskie, VP Marketing
Dean Askounis, Dir Advanced Manufacturing

TOTAL EMPLOYMENT

50

AUTOMOTIVE R&D SPENDING

75%

ECONOMIC ACTIVITY 2001

\$10 Million

PROFESSIONAL STAFF

Engineers: 15
Metallurgists: 2
Technicians: 25

R&D ACTIVITIES

Applied research, alloy development, alloys testing and mold engineering

PRODUCTS

Components of molded plastic, die cast metal, direct metal, stamped metal, hydroformed and thixomolded

FACILITY DESCRIPTION

40,000 sq ft facility includes: metallurgical lab, fabrication shop and CAD/CAM area

OTHER SERVICES

Not reported

Pro-Tech Industries

6079 Birch Road, Flint, MI 48507
ph: 810.238.1030 • www.protechind.com

07/2002

PARENT ORGANIZATION

Pro-Tech Industries

PRINCIPALS

John Tomczak, President
Gerald Tomczak, Vice President
David Currie, President, Manufacturing Operations

TOTAL EMPLOYMENT

40

AUTOMOTIVE R&D SPENDING

95%

ECONOMIC ACTIVITY 2001

\$6 Million

PROFESSIONAL STAFF

Controls design engineers: 2
Draftsmen: 5

Machine assemblers: 5
Machinists: 4
Mechanical design engineers: 15

R&D ACTIVITIES

Manufacturing design and build services. Testing advanced product design engineering services and product development

PRODUCTS

Powertrain, fuel systems, instrumentation and chassis development both in the product development and manufacturing design/build

FACILITY DESCRIPTION

Mechanical and electrical design and build services

OTHER SERVICES

Mechanical and controls design and build services

QED Inc

1393 Wheaton, Suite 100, Troy, MI 48083
ph: 248.740.2630 • fx: 734.740.263 • e-mail: QED_ASP@compuserve.com

PARENT ORGANIZATION

QED Inc

PRINCIPALS

Alan S Phillips, Vice President

TOTAL EMPLOYMENT

50

AUTOMOTIVE R&D SPENDING

40%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design: 10

Engineers: 15

Program managers: 5

R&D ACTIVITIES

Prototype/production design, engineering vehicle developments and integration

PRODUCTS

Body, interior cockpit and chassis

FACILITY DESCRIPTION

Design and engineering facility

OTHER SERVICES

Design and engineering services and vehicle development consulting. Manpower service for the automotive industry

QMP America

17197 N Laurel Park, Livonia, MI 48152
ph: 734.953.0077 • fx: 734.953.0082 • www.qmp-powders.com

PARENT ORGANIZATION

QMP America

PRINCIPALS

MH Thibodeau, President

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers

Researchers

Specialists

Technicians

R&D ACTIVITIES

Basic and applied research

PRODUCTS

Ferrous powder producer—iron and steel powders

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

No external services

QQC, Inc

12825 Ford Road, Dearborn, MI 48126
ph: 313.581.0043 • fx: 313.581.2480 • www.qqc.com

07/2002

PARENT ORGANIZATION

QQC, Inc

PRINCIPALS

P Mistry, President, Dir Research

TOTAL EMPLOYMENT

6

AUTOMOTIVE R&D SPENDING

35%

ECONOMIC ACTIVITY 2001

\$1.5 Million

PROFESSIONAL STAFF

Engineers: 2
Scientists: 2
Technicians: 2

R&D ACTIVITIES

Applied research of thin film coatings

PRODUCTS

Engine and chassis components

FACILITY DESCRIPTION

Laser lab and metallurgical lab

OTHER SERVICES

Consulting and working on projects for others

RECARO North America, Inc

3275 Lapeer Road W, Auburn Hills, MI 48236
ph: 800.8RECARO • www.recaro-nao.com

07/2002

PARENT ORGANIZATION

RECARO North America, Inc

PRINCIPALS

John Marcozzi, President, COO
Yoji Komori, Executive Dir Sales

TOTAL EMPLOYMENT

60

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Designers
Engineers

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Manufacturer of specialty automotive seats

FACILITY DESCRIPTION

46,000 sq ft

OTHER SERVICES

Work on products for others

Ricardo Inc

9059 Samuel Barton Drive, Belleville, MI 48111
ph: 734.397.6666 • www.ricardo.com

PARENT ORGANIZATION

Ricardo, PLC

PRINCIPALS

Jeremy Holt, President
Peter Brown, VP Powertrain Projects,
Design Engineering
Louis Infante, VP Vehicle Engineering
Graham Weller, VP Engineering
Clive Wotton, VP Project Mgmt, Quality

TOTAL EMPLOYMENT

300

AUTOMOTIVE R&D SPENDING

80%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 150
Machinist: 17
Technicians: 133

R&D ACTIVITIES

Applied research and advanced engineering programs

PRODUCTS

Engineering programs and advanced engineering projects relating to powertrain, driveline and vehicle engineering

FACILITY DESCRIPTION

Design and analysis work stations, engine and transmission test beds; fully equipped and semi-anechoic, test track, chemistry laboratory, vehicle calibration and emissions facility, engine and transmission test rigs, metallurgy and metrology laboratory, PCB design, population and test facility, heat treatment facilities and rapid prototyping stations

OTHER SERVICES

Consulting work, project work at client facilities, as well as project work for clients at Ricardo facilities

Robert Bosch Corporation

38000 Hills Tech Drive, Farmington Hills, MI 48331
ph: 248.553.1318 • www.robertbosch.com

PARENT ORGANIZATION

Robert Bosch Corp GmbH

PRINCIPALS

Dr Kurt Liedtke, Chairman, CEO
John Moulton, President Powertrain Div
Dave Robinson, President Electrical/Electronic Div
Hans Weckerle, President Chassis Div

TOTAL EMPLOYMENT

1,300

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$4.2 Billion

PROFESSIONAL STAFF

Engineers: 600
Technical Sales Engineers: 400

R&D ACTIVITIES

Testing, application development and some primary product development

PRODUCTS

Brakes, engine management, transmission controls, safety restraints, closure systems and others

FACILITY DESCRIPTION

North American automotive administrative and technical headquarters

OTHER SERVICES

No external services

Sachs Automotive of America

2107 Crooks Road, Troy, MI 48084
ph: 248.458.3600 • www.zfsachs.com

07/2002

PARENT ORGANIZATION

ZF Friedrichshafen AG

PRINCIPALS

Julio Caspari, President
Ron Gesquiere, VP Sales, Engineering
Dave Hunt, Dir Engineering (Suspension)
Ralf Nenninger, Dir Sales, Engineering (Clutch)
Michael Fister Dir Sales, Engineering
(Torque Converter)

TOTAL EMPLOYMENT

130

AUTOMOTIVE R&D SPENDING

95%

ECONOMIC ACTIVITY 2001

R&D proto: \$2.5 Million to \$3 Million
NAFTA production: \$270 Million

PROFESSIONAL STAFF

Designers: 7
Engineering specialists: 4
Engineers: 27
Technicians: 21

R&D ACTIVITIES

Application engineering and product development

PRODUCTS

Suspension: shocks/struts and modules.
Powertrain: clutches and torque converters

FACILITY DESCRIPTION

Product design and development, mechanical testing, machine shop and prototyping lab

OTHER SERVICES

No external services

Saginaw Machine Systems, Inc

800 N Hamilton Street, Saginaw, MI 48602
ph: 989.753.8464 • fx: 989.753.1751 • www.saginawmachine.com

07/2002

PARENT ORGANIZATION

SMS Holdings Co, Inc

PRINCIPALS

Jim Buckley, President, CEO
Al Gay, Mgr Engineering and Service

TOTAL EMPLOYMENT

58

AUTOMOTIVE R&D SPENDING

95%

ECONOMIC ACTIVITY 2001

\$16 Million

PROFESSIONAL STAFF

Engineers: 13
Technicians: 18

R&D ACTIVITIES

Applied research, testing, engineering and product development

PRODUCTS

Powertrain; including transmission, clutch, drive assemblies and brakes

FACILITY DESCRIPTION

Machine tool manufacturing facility

OTHER SERVICES

Engineering and technical consultation available.
Facility not available for use by others

Saturn Electronics & Engineering, Inc

255 Rex Boulevard, Auburn Hills, MI 48326
ph: 248.853.5724 • fx: 248.299.8514 • www.saturnee.com

PARENT ORGANIZATION

Saturn Electronics & Engineering, Inc

PRINCIPALS

Wally Tsuha, President, CEO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Design engineers
Manufacturing engineers
Technicians

R&D ACTIVITIES

Technology/product development, engineering and prototyping

PRODUCTS

Electronics design, engineering services and prototypes

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

Sealant Equipment & Engineering, Inc

45677 Helm Street, Plymouth, MI 48170
ph: 734.459.8600 • fx: 734.459.8686 • www.sealantequipment.com

PARENT ORGANIZATION

Sealant Equipment & Engineering, Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Not reported

PRODUCTS

Meter/mix/dispensing equipment and fluid control valves

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Not reported

Siemens VDO Automotive North American Technical Center

2400 Executive Hills Boulevard, Auburn Hills, MI 48236
ph: 248.209.5774 • fx: 248.209.7822 • www.usa.siemensvdo.com

07/2002

PARENT ORGANIZATION

Siemens AG

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Development product. Powertrain testing and systems development

PRODUCTS

Advanced fuel control systems, electronic displays and instrumentation

FACILITY DESCRIPTION

Emissions, chassis cell, vehicle climatic chamber and engine dynos

OTHER SERVICES

Testing

SLP Engineering

1465 Axtell Road, Troy, MI 48084
ph: 248.288.3888 • www.slpeng.com

07/2002

PARENT ORGANIZATION

SLP Engineering

PRINCIPALS

Ed Hamburger, President
Reg Harris, Marketing Dir
Jeff Yachnin, Chief Engineer

TOTAL EMPLOYMENT

35

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$30 Million

PROFESSIONAL STAFF

Project/Design engineers: 4

R&D ACTIVITIES

Design, product development, and testing of automotive components including: body components, chassis/suspension and powertrain

PRODUCTS

Exterior cladding, hoods, suspension, exhaust systems, airboxes and rockers

FACILITY DESCRIPTION

Engineering facility, chassis rolls, engine dyno, prototype shop, design studio and clay studio

OTHER SERVICES

Tier 1 for General Motors
(market and sell speciality vehicles)

Solvay Engineered Polymers

Automotive Applications Development Center

1200 Harmon Road, Auburn Hills, MI 48236
ph: 248.391.9500 • fx: 248.391.9501 • www.solvayengineeredpolymers.com

PARENT ORGANIZATION

Solvay SA

PRINCIPALS

Bruce Denison, Mgr Advanced Processes
Craig Abernathy, Mgr CAE Services
Dave Edge, Mgr Surface Applications

TOTAL EMPLOYMENT

50

AUTOMOTIVE R&D SPENDING

95%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 10
Technicians: 10

R&D ACTIVITIES

Testing, applied research and engineering

PRODUCTS

Automotive exterior and interior trim parts

FACILITY DESCRIPTION

Mechanical lab and test facility

OTHER SERVICES

Consulting to customers

Soudronic Automotive

31690 Glendale Avenue, Livonia, MI 48151
ph: 734.367.9422 • fx: 734.367.9433 • www.soudronic.com

PARENT ORGANIZATION

Soudronic Automotive

PRINCIPALS

Marcel van Schaik, General Mgr North America

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers

R&D ACTIVITIES

Development of advanced welding systems

PRODUCTS

Welding equipment for tailored/tubular blanks and laser welding

FACILITY DESCRIPTION

Welding equipment manufacturing and R&D site

OTHER SERVICES

Not reported

Specialized Vehicles, Inc

2468 Industrial Row, Troy, MI 48084
ph: 248.280.2000 • fx: 248.280.2255 • www.svi-results.com

07/2002

PARENT ORGANIZATION

Specialized Vehicles, Inc

PRINCIPALS

Michael J Koran, President

TOTAL EMPLOYMENT

20

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$1.5 Million

PROFESSIONAL STAFF

Engineers: 2

Technicians: 7

R&D ACTIVITIES

Automotive engine concept development, design and implementation

PRODUCTS

Automotive powertrain systems and subsystems

FACILITY DESCRIPTION

Vehicle development and engine dynamometer lab

OTHER SERVICES

Automotive engine concept development, design and implementation

SSI Technologies Inc

24114 Research Drive, Farmington Hills, MI 48335
ph: 248.471.0500 • fx: 248.471.0507 • www.ssitechnologies.com

07/2002

PARENT ORGANIZATION

SSI Technologies Inc

PRINCIPALS

David Baum, CEO

Bill Coon, COO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Not reported

PRODUCTS

Sensors and sensor-based monitoring systems, coil assemblies, solenoids and powdered metal parts

FACILITY DESCRIPTION

Technical Center

OTHER SERVICES

Not reported

Stabilus

36225 Mound Road, Sterling Heights, MI 48310
ph: 586.977.2950 • fx: 586.446.3920 • www.stabilus.com

PARENT ORGANIZATION

Stabilus

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Application engineers

R&D ACTIVITIES

Application engineering and product development

PRODUCTS

Gas springs and dampers

FACILITY DESCRIPTION

Testing and development laboratory

OTHER SERVICES

Not reported

STM Power, Inc

275 Metty Drive, Ann Arbor, MI 48103
ph: 734.995.1755 • fx: 734.995.0610 • www.stmpower.com

PARENT ORGANIZATION

STM Power, Inc

PRINCIPALS

Lennart Johansson, Chairman, CTO
Tom Hazlett, President, CEO

TOTAL EMPLOYMENT

60

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers
Managers

R&D ACTIVITIES

Basic and applied research, testing, engineering and product development

PRODUCTS

Complete engines and generator sets

FACILITY DESCRIPTION

Engineering and test lab

OTHER SERVICES

No external services

Subaru Research and Development, Inc

3995 Research Park Drive, Ann Arbor, MI 48108

ph: 734.623.0075

07/2002

PARENT ORGANIZATION

Fuji Heavy Industries, Ltd

PRINCIPALS

Tatsuo Sakai, President

Frank Kurk, Facility Manager

TOTAL EMPLOYMENT

26

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 13

Professionals: 7

Technicians: 3

R&D ACTIVITIES

Emissions testing, research and design

PRODUCTS

Vehicle emissions, durability testing, government vehicle certification, vehicle design and service analysis

FACILITY DESCRIPTION

Chassis dynamometer emissions testing area, mechanical service area and design studio

OTHER SERVICES

No external services

Takata, Inc

2500 Takata Drive, Auburn Hills, MI 48326

ph: 248.377.1500 • fx: 248.373.5186 • www.takata.com

07/2002

PARENT ORGANIZATION

Takata, Inc

PRINCIPALS

Not reported

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Quality engineers

Safety system engineers

R&D ACTIVITIES

Engineering and testing

PRODUCTS

Automotive safety systems, seat belts, air bag systems and steering wheels

FACILITY DESCRIPTION

Prototype build and evaluation shop, research and test laboratory

OTHER SERVICES

No external services

Testing Service Group

828 Whitney Drive, Lapeer, MI 48446
ph: 810.245.1600 • fx: 810.246.1606 • www.testlab.com

PARENT ORGANIZATION

Testing Service Group

PRINCIPALS

Mark Lockwood

TOTAL EMPLOYMENT

40

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers
Technicians

R&D ACTIVITIES

Testing

PRODUCTS

Fuel systems and testing/analysis services

FACILITY DESCRIPTION

Electronics and environmental labs

OTHER SERVICES

Labs for testing fuel systems

Textron Fastening Systems

Technical Resource Center Lab

6125 Eighteen Mile Road, Sterling Heights, MI 48314
ph: 586.254.3900 • www.textronfasteningsystems.com

PARENT ORGANIZATION

Textron

PRINCIPALS

Dave Fulbright, VP Engineering
John Allen, Dir Engineering
Bill Turnmire, Mgr Laboratory Services

TOTAL EMPLOYMENT

100

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Testing, engineering and product development

PRODUCTS

Fastening systems for all automotive assemblies

FACILITY DESCRIPTION

Mechanical and performance testing laboratory
for fasteners

OTHER SERVICES

Contracted testing for customers with fastener related
problems

The Budd Company

Automotive Center

1515 Atlantic Boulevard, Auburn Hills, MI 48326
ph: 248.391.2880 • www.buddcompany.com

07/2002

PARENT ORGANIZATION

ThyssenKrupp

PRINCIPALS

William C Phillips, Director

TOTAL EMPLOYMENT

26

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$2.5 Million

PROFESSIONAL STAFF

Engineers: 17

Technicians: 7

R&D ACTIVITIES

Applied research testing and process development

PRODUCTS

Body systems, closure systems and chassis systems

FACILITY DESCRIPTION

Facilities for product and material testing, analytical simulation and production and process development

OTHER SERVICES

Work only for the company

Tower Automotive

Technical/Customer Service Center

27175 Haggerty Road, Novi, MI 48377
ph: 248.675.6000 • fx: 248.675.6200 • www.towerautomotive.com

07/2002

PARENT ORGANIZATION

Tower Automotive

PRINCIPALS

James Arnold, Division Leader

David DeBoer, Technology Leader

TOTAL EMPLOYMENT

250

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

No sales

PROFESSIONAL STAFF

Engineering leaders: 22

Mechanical designers/analysts: 47

R&D ACTIVITIES

Product development and testing

PRODUCTS

Chassis and structural products

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Product development for OEM customers and some contracted product development

Toyota Technical Center USA, Inc

1555 Woodridge Avenue, Ann Arbor, MI 48105
ph: 734.995.2600 • fx: 734.995.4200 • www.toyota.com/about

PARENT ORGANIZATION

Toyota Motor Corp

PRINCIPALS

George Yamashina, President

TOTAL EMPLOYMENT

550

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Engineers: 300

Technicians: 100

R&D ACTIVITIES

Engineering and product development

PRODUCTS

Vehicle design engineering, parts, materials, and vehicle evaluation, prototype vehicle development, and emissions certification

FACILITY DESCRIPTION

Test facility, prototype lab, material and parts evaluation labs

OTHER SERVICES

No external services

TRW Automotive

12025 Tech Center Drive, Livonia, MI 48150
ph: 734.266.2600 • www.trw.com

PARENT ORGANIZATION

TRW Automotive

PRINCIPALS

John Plant, President, CEO

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

Not reported

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Designers

Engineers

Researchers

Technicians

R&D ACTIVITIES

Applied research, engineering and product development

PRODUCTS

Braking, steering, suspension, seat belt systems, safety electronics and engine components

FACILITY DESCRIPTION

Not reported

OTHER SERVICES

Work on products for others

US ARMY Tank-Automotive RD&E Center (TARDEC) National Automotive Center (NAC)

6105 E Eleven Mile Road, Warren, MI 48397
ph: 586.574.6387 • www.tacom.army.mil/tardec/nac/

07/2002

PARENT ORGANIZATION

Department of the Army

PRINCIPALS

Dr Richard E McClelland, Dir TARDEC
Dennis J Wend, Director, NAC

TOTAL EMPLOYMENT

Not reported

AUTOMOTIVE R&D SPENDING

75%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research, testing, engineering and product development

PRODUCTS

Component, subsystem and systems for combat and tactical vehicles. Fuels and lubricants; fuel storage, distribution and quality. Water generation, purification, distribution, quality and logistics equipment

FACILITY DESCRIPTION

The following principal laboratories: advanced collaborative environment, advanced concepts, advanced material and manufacturing, bridging, crew station technology, electronics architecture, embedded simulation, fuels and lubricants, high performance computing, intelligent mobility research, laser, propulsion, rapid prototyping, robotic system integration, simulation, terrain sensing, track and suspension, visual perception and water purification labs

OTHER SERVICES

Many of TARDEC's labs are open to use by the private sector

United States Steel Automotive Center

5850 New King Court, Troy, MI 48098
ph: 248.267.2608 • www.ussautomotive.com

07/2002

PARENT ORGANIZATION

United States Steel Corp

PRINCIPALS

J Juddo, Dir Product Technology
Dr M Shi, Mgr Advanced Applications
J Shaw, Technical Marketing Mgr

TOTAL EMPLOYMENT

100

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Applications engineers: 12
Material scientists: 5
Technicians: 6

R&D ACTIVITIES

Advanced steel characterization and application technology—all automotive aspects

PRODUCTS

Sheet steel

FACILITY DESCRIPTION

Mechanical, metallography, material test and computer simulation lab

OTHER SERVICES

Mechanical and material test services. Work on projects for others

Valeo

3000 University Drive, Auburn Hills, MI 48326
ph: 248.340.3000 x8437 • www.valeo.com

07/2002

PARENT ORGANIZATION

Valeo SA

PRINCIPALS

Chandra Lewis, Marketing Manger
Robert Strazzella, VP North America

TOTAL EMPLOYMENT

800

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

North America: \$2.2 Billion

PROFESSIONAL STAFF

Engineers: 300

R&D ACTIVITIES

Design, testing and product development

PRODUCTS

Thermal systems (engine cooling, climate control);
electrical/electronic (wipers, switches-sensors, start-
ers-alternators, security systems, motors & actuators,
lighting) and transmissions (clutches)

FACILITY DESCRIPTION

Auburn Hills—electrical-electronics development
(University Dr)
Auburn Hills—thermal systems development
(N Atlantic Blvd)
Livonia—clutch testing

OTHER SERVICES

No external services

Visteon Technical Center

17000 Rotunda Drive, Dearborn, MI 48121
ph: 313.755.9121 • fx: 313.755.2776 • www.visteon.com

07/2002

PARENT ORGANIZATION

Visteon

PRINCIPALS

John Quigley, Global Technology Development
John Kill, VP Product Development

TOTAL EMPLOYMENT

3600

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

Not reported

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research, testing, engineering and product
development

PRODUCTS

All-wheel drive systems, integrated circuits, audio
and in-vehicle entertainment systems, fuel storage
and delivery systems

FACILITY DESCRIPTION

Multiple facilities

OTHER SERVICES

No external services

Yazaki North America Inc

6801 N Haggerty Road, Canton, MI 48187

ph: 734.983.1000 • www.yzaki-na.com

07/2002

PARENT ORGANIZATION

Yazaki International Corp (Holding)

Yazaki Corp (Japan)

PRINCIPALS

Kurt Zielske, VP EDS Engineering

Myron Trenne, VP R&D

TOTAL EMPLOYMENT

1,400

AUTOMOTIVE R&D SPENDING

100%

ECONOMIC ACTIVITY 2001

\$1.65 Billion

PROFESSIONAL STAFF

Not reported

R&D ACTIVITIES

Applied research, testing, engineering and product development

PRODUCTS

Wiring harnesses, electronics and instrumentation

FACILITY DESCRIPTION

Electronics lab

OTHER SERVICES

Offers testing facility to other companies



COMPANIES BY LOCATION

This index lists companies according to the Michigan municipality where their research, development or testing facilities are located.

ALLEN PARK

AFL Automotive

ANN ARBOR

Bosal International North America
Federal-Mogul
Lotus Engineering
Mechanical Simulation
Mitsubishi Motor
Research & Development of America
NSK
STM Power
Subaru Research and Development
Takata
Toyota Technical Center USA

AUBURN HILLS

Analytical Process Systems
Autoliv
Bosch Rexroth
DaimlerChrysler
Dow Automotive
FEV Engine Technology
GKN Automotive
IEE Automotive
Loctite, Automotive Technology Center
Molex Automotive
MSX Vehicle Development and
Engineering Center
OMG
POM Group
RECARO North America
Saturn Electronics & Engineering
Siemens VDO Automotive
North American Technical Center
Solvay Engineered Polymers,
Automotive Applications Development Center
Takata
The Budd Company Automotive Center
Valeo

BELLEVILLE

Ricardo

BRIGHTON

Delphi Automotive Systems Technical Center

BUCHANAN

Clark Engineering Services

BURTON

MDE International

CADILLAC

Michigan Rubber Products

CANTON

ATEQ
Yazaki North America

CHARLEVOIX

Michigan Scientific

DEARBORN

Ford Motor
QQC
Visteon Technical Center

DETROIT

Greening Testing Laboratories

DEXTER

Pilot Industries

EATON RAPIDS

Fasco DC Motors

FARMINGTON HILLS

Calsonic Kansei North America
MAHLE
Nissan Technical Center North America
North American Lighting
Robert Bosch
SSI Technologies

FERNDALE

Hayes Lemmerz International,
Technical Services

FLINT

Pro-Tech Industries

GRAND HAVEN

Grand Haven Stamped Products

GRAND RAPIDS

Burke E Porter Machinery

Cascade Engineering

Entela

HOLLAND

Donnelly

Dynamic

HOWELL

Ogihara America

LAPEER

Testing Service Group

LIVONIA

Bruel & Kjaer

FCI Automotive

Karmann USA

Magna Automotive Testing

McLaren Performance Technologies

Paragon Laboratories

QMP America

Soudronic Automotive

TRW Automotive

MADISON HEIGHTS

Modern Body Engineering

MILFORD

Michigan Scientific

MT. CLEMENS

Emhart Fastening Teknologies

NORTHVILLE

Mitsubishi Electric Automotive America

NOVI

Citation

Cosworth Technology

Husky Injection Molding Systems

Tower Automotive

Technical/Customer Service Center

PLYMOUTH

AVL Powertrain Engineering

Collins & Aikman

Global Product Development Division

Dow Corning

Durr Industries

Freudenberg-NOK

Johnson Controls Automotive Systems Group

Koyo North American

Engineering & Technical Center

Metaldyne

Perceptron

Sealant Equipment & Engineering

PONTIAC

Gonzalez Design Engineering

PORTAGE

MANN + HUMMEL Automotive

ROCHESTER HILLS

American Axle & Manufacturing

AAM Technical Center

BOS Automotive

Branson Ultrasonics

Dura Automotive Systems

FANUC Robotics North America

Gates Automotive Technical Center (GATC)

ROMEO

Automotive Technologies International

ROMULUS

Aztec Manufacturing

SAGINAW

Saginaw Machine Systems

SOUTHFIELD

Corrsys-Datron Sensorsystems

Denso International America

SOUTHFIELD CONTINUED

DSM Engineering Plastics,
Automotive Marketing & Technical Center
Eaton Innovation Center
First Technology
Automotive and Special Products
Kaiser Aluminum
Lear, Technical Division
Peterson Spring

STERLING HEIGHTS

Borg-Warner Air Fluid Systems
Hawtal Whiting
Stabilus
Textron Fastening Systems,
Technical Resource Center

TAYLOR

Johnson Matthey Testing

TRENTON

National Steel,
Technical Research Center

TROY

Altair Engineering
ArvinMeritor Automotive
Control Power-Reliance
Defiance Testing & Engineering
Delphi
DuPont Automotive
Hantech
Hi-Lex Automotive Center
HP Pelzer Automotive Systems
Hutchinson FTS
Inergy Automotive Systems Technical Center
Magneti Marelli North America
MGA Research
Munro & Associates
QED
Sachs Automotive of America
SLP Engineering
Specialized Vehicles
United States Steel Automotive Center

WARREN

General Motors Technical Center
Guardian Automotive Products
US ARMY Tank-Automotive RD&E Center
(TARDEC) National Automotive Center

WIXOM

Climax Research Services

WYANDOTTE

BASF

ZEELAND

Gentex



VEHICLE COMPONENT/SPECIALITIES

In this index, companies are listed according to the specialities. Component groupings include:

- Chassis (body/suspension/brakes)
- Powertrain/drivetrain
- Interior
- Emissions
- Safety
- Materials/Processes

CHASSIS: BODY/ SUSPENSION/BRAKES

AFL Automotive
 Altair Engineering
 ArvinMeritor Automotive
 Aztec Manufacturing
 BASF
 Borg-Warner Air Fluid Systems
 Branson Ultrasonics
 Bruel & Kjaer
 Cascade Engineering
 DaimlerChrysler
 Defiance Testing & Engineering
 Delphi
 Delphi Automotive Systems Technical Center
 Denso International America
 Donnelly
 Dura Automotive Systems
 Dynamic
 Entela
 Fasco DC Motors
 FCI Automotive
 Ford Motor
 Freudenberg-NOK
 General Motors Technical Center
 Gentex
 Grand Haven Stamped Products
 Guardian Automotive Products
 Hayes Lemmerz International,
 Technical Services
 Hi-Lex Automotive Center
 HP Pelzer Automotive Systems
 Karmann USA
 Koyo North American
 Engineering & Technical Center
 Lotus Engineering
 Magneti Marelli North America
 Mechanical Simulation
 Metaldyne
 Michigan Rubber Products
 Michigan Scientific
 Mitsubishi Electric Automotive America
 Molex Automotive

MSX Vehicle Development and
 Engineering Center
 Nissan Technical Center North America
 North American Lighting,
 Ogihara America
 POM Group
 Pro-Tech Industries
 QED
 QQC
 Robert Bosch
 Sachs Automotive of America
 Saginaw Machine Systems
 Saturn Electronics & Engineering
 Sealant Equipment & Engineering
 SLP Engineering
 Solvay Engineered Polymers,
 Automotive Applications Development Center
 Stabilus
 Textron Fastening Systems,
 Technical Resource Center
 The Budd Company
 Automotive Center
 Tower Automotive
 Technical/Customer Service Center
 TRW Automotive
 US ARMY
 Tank-Automotive RD&E Center (TARDEC)
 Valeo
 Visteon Technical Center
 Yazaki North America

POWERTRAIN/ DRIVETRAIN

ATEQ
 AVL Powertrain Engineering
 Aztec Manufacturing
 Branson Ultrasonics
 Calsonic Kansei North America
 Cosworth Technology
 DaimlerChrysler
 Defiance Testing & Engineering
 Delphi
 Delphi Automotive Systems Technical Center

Denso International America
 Dow Corning
 Dynamic
 Eaton Innovation Center
 Fasco DC Motors
 Federal-Mogul
 FEV Engine Technology
 Ford Motor
 Freudenberg-NOK
 Gates Automotive Technical Center (GATC)
 General Motors Technical Center
 GKN Automotive
 Hayes Lemmerz International
 Technical Services
 Inergy Automotive Systems Technical Center
 Johnson Controls Automotive Systems Group
 Lotus Engineering
 MAHLE
 MANN + HUMMEL Automotive
 McLaren Performance Technologies
 Metaldyne
 Michigan Scientific
 Mitsubishi Electric Automotive America
 NSK
 Pilot Industries
 Pro-Tech Industries
 QQC
 Ricardo
 Robert Bosch
 Sachs Automotive of America
 Saginaw Machine Systems
 Siemens VDO Automotive
 North American Technical Center
 SLP Engineering
 Specialized Vehicles
 SSI Technologies
 STM Power
 Testing Service Group
 TRW Automotive
 Valeo
 Visteon Technical Center

INTERIOR

BASF
 BOS Automotive
 Branson Ultrasonics
 Calsonic Kansei North America
 Cascade Engineering
 Collins & Aikman
 Global Product Development Division
 DaimlerChrysler
 Defiance Testing & Engineering
 Delphi Automotive Systems Technical Center
 Denso International America
 Donnelly
 Emhart Fastening Teknologies
 Entela
 First Technology
 Automotive and Special Products
 General Motors Technical Center
 Gentex
 Grand Haven Stamped Products
 Hi-Lex Automotive Center
 HP Pelzer Automotive Systems
 Huchinson FTS
 Johnson Controls Automotive Systems Group
 Lear, Technical Division
 Mitsubishi Electric Automotive America
 North American Lighting
 Ogihara America
 Pro-Tech Industries
 QED
 RECARO North America
 Siemens VDO Automotive
 North American Technical Center
 Solvay Engineered Polymers,
 Automotive Applications Development Center
 Takata
 Visteon Technical Center
 Yazaki North America

EMISSIONS

Altair Engineering
 Analytical Process Systems
 AVL Powertrain Engineering

EMISSIONS CONTINUED

Bosal International North America
 Cosworth Technology
 DaimlerChrysler
 Defiance Testing & Engineering
 Denso International America
 FEV Engine Technology
 Ford Motor
 General Motors Technical Center
 GKN Automotive
 Johnson Matthey Testing
 Michigan Rubber Products
 Mitsubishi Motor
 Research & Development of America
 OMG
 Paragon Laboratories
 SLP Engineering
 Subaru Research and Development
 Toyota Technical Center USA
 US ARMY
 Tank-Automotive RD&E Center (TARDEC)

SAFETY

Altair Engineering
 Analytical Process Systems
 Autoliv
 Automotive Technologies International
 DaimlerChrysler
 Denso International America
 Dow Automotive
 Dynamic
 Emhart Fastening Teknologies
 First Technology
 Automotive and Special Products
 Ford Motor
 General Motors Technical Center
 IEE Automotive
 Magna Automotive Testing
 Mechanical Simulation
 MGA Research
 Mitsubishi Motor
 Research & Development of America
 Robert Bosch

Takata
 TRW Automotive

MATERIALS/PROCESSES

Altair Engineering
 Bosch Rexroth
 Burke E Porter Machinery
 Clark Engineering Services
 Climax Research Services
 Control Power-Reliance
 Corrsys-Datron Sensorsystems
 Dow Automotive
 Dow Corning
 DuPont Automotive
 Durr Industries
 Entela
 FANUC Robotics North America
 GKN Automotive
 Gonzalez Design Engineering
 Greening Testing Laboratories
 Hantech
 Hawtal Whiting
 Husky Injection Molding Systems
 Kaiser Aluminum
 Loctite, Automotive Technology Center
 Lotus Engineering
 Magna Automotive Testing
 MDE Internationa
 MGA Research
 Michigan Scientific
 Mitsubishi Motor
 Research & Development of America
 Modern Body Engineering
 Munro & Associates
 National Steel Technical Research Center
 Paragon Laboratories
 Perceptron
 POM Group
 QMP America
 Soudronic Automotive
 Subaru Research and Development
 Toyota Technical Center USA
 United States Steel Automotive Center



COMPANY ACTIVITIES

For this directory research and development are defined as any of following activities:

- Basic research
- Applied research
- Engineering
- Testing
- Product development

Companies are listed in each category that applies

BASIC RESEARCH

BASF
 Bosal International North America
 Collins & Aikman
 Global Product Development Division
 Delphi
 Dow Automotive
 Dow Corning
 Eaton Innovation Center
 Gentex
 Gonzalez Design Engineering
 Inergy Automotive Systems Technical Center
 Johnson Matthey Testing
 Kaiser Aluminum
 Michigan Rubber Products
 National Steel Technical Research Center
 Nissan Technical Center North America
 Paragon Laboratories
 QMP America
 STM Power
 United States Steel Automotive Center

APPLIED RESEARCH

BASF
 Collins & Aikman
 Global Product Development Division
 DaimlerChrysler
 Delphi
 Delphi Automotive Systems Technical Center
 Dow Automotive
 Dow Corning
 DuPont Automotive
 Dura Automotive Systems
 Durr Industries
 Eaton Innovation Center
 FANUC Robotics North America
 Fasco DC Motors
 FCI Automotive
 Ford Motor
 Gates Automotive Technical Center (GATC)
 General Motors Technical Center
 Gentex

Gonzalez Design Engineering
 Greening Testing Laboratories
 Guardian Automotive Systems
 Hayes Lemmerz International
 Technical Services
 Hi-Lex Automotive Center
 Hutchinson FTS
 Husky Injection Molding Systems
 Inergy Automotive Systems Technical Center
 Johnson Controls Automotive Systems Group
 Johnson Matthey Testing
 Kaiser Aluminum
 Karmann USA
 Koyo North American
 Engineering & Technical Center
 Lear Technical Division
 Loctite, Automotive Technology Center
 Lotus Engineering
 Mechanical Simulation
 Michigan Rubber Products
 National Steel
 Technical Research Center
 Nissan Technical Center North America
 OMG
 Paragon Laboratories
 Perceptron
 Pilot Industries
 POM Group
 QMP America
 QQC
 Ricardo
 Robert Bosch
 Sachs Automotive of America
 Saginaw Machine Systems
 Solvay Engineered Polymers,
 Automotive Applications Development Center
 Stabilus
 STM Power
 Subaru Research and Development
 The Budd Company
 Automotive Center
 TRW Automotive
 United States Steel Automotive Center

US ARMY
 Tank-Automotive RD&E Center (TARDEC)
 Visteon Technical Center
 Yazaki North America

ENGINEERING

AFL Automotive
 Altair Engineering, IncAnalytical Process Systems
 ArvinMeritor Automotive
 ATEQ
 AVL Powertrain Engineering
 Aztec Manufacturing
 Borg-Warner Air Fluid Systems
 Bosch Rexroth
 Branson Ultrasonics
 Burke E Porter Machinery
 Cascade Engineering
 Climax Research Services
 Collins & Aikman,
 Global Product Development Division
 Corrsys-Datron Sensorsystems
 Cosworth Technology
 DaimlerChrysler
 Defiance Testing & Engineering
 Delphi
 Delphi Automotive Systems Technical Center
 Donnelly
 Dow Automotive
 Dow Corning
 Emhart Fastening Teknologies
 Entela
 FANUC Robotics North America
 Fasco DC Motors
 FCI Automotive
 Federal-Mogul
 FEV Engine Technology
 First Technology
 Automotive and Special Products
 Ford Motor
 Gates Automotive Technical Center (GATC)
 General Motors Technical Center

Gentex
 GKN Automotive
 Gonzalez Design Engineering
 Greening Testing Laboratories
 Guardian Automotive Systems
 Hantech
 Hayes Lemmerz International
 Technical Services
 Hi-Lex Automotive Center
 Husky Injection Molding Systems
 Hutchinson FTS
 IEE Automotive
 Inergy Automotive Systems Technical Center
 Johnson Controls Automotive Systems Group
 Johnson Matthey Testing
 Karmann USA
 Koyo North American
 Engineering & Technical Center
 Loctite, Automotive Technology Center
 Lotus Engineering
 Magna Automotive Testing
 MANN + HUMMEL Automotive
 McLaren Performance Technologies
 Michigan Rubber Products
 Michigan Scientific
 Mitsubishi Electric Automotive America
 Mitsubishi Motor
 Research & Development of America
 Modern Body Engineering
 Molex Automotive
 MSX Vehicle Development and
 Engineering Center
 Munro & Associates
 National Steel Technical Research Center
 Nissan Technical Center North America
 North American Lighting
 NSK
 OMG
 Perceptron
 Pilot Industries
 POM Group
 Pro-Tech Industries
 QED

ENGINEERING CONTINUED

RECARO North America
 Ricardo
 Robert Bosch
 Sachs Automotive of America
 Saginaw Machine Systems
 Saturn Electronics & Engineering
 Siemens VDO Automotive
 North American Technical Center
 SLP Engineering
 Solvay Engineered Polymers,
 Automotive Applications Development Center
 Specialized Vehicles
 STM Power
 Subaru Research and Development
 Takata
 Textron Fastening Systems,
 Technical Resource Center
 The Budd Company
 Automotive Center
 Toyota Technical Center USA
 TRW Automotive
 US ARMY
 Tank-Automotive RD&E Center (TARDEC)
 Visteon Technical Center
 Yazaki North America

TESTING

Analytical Process Systems
 Altair Engineering, Inc
 ATEQ
 Autoliv
 AVL Powertrain Engineering
 Calsonic Kansei North America
 Cascade Engineering
 Clark Engineering Services
 Collins & Aikman,
 Global Product Development Division
 Control Power-Reliance
 Cosworth Technology
 DaimlerChrysler
 Defiance Testing & Engineering
 Delphi

Delphi Automotive Systems Technical Center
 Denso International America
 Dow Automotive
 Dura Automotive Systems
 Dynamic
 Entela
 Federal-Mogul
 FEV Engine Technology
 Ford Motor
 Freudenberg-NOK
 Gates Automotive Technical Center (GATC)
 General Motors Technical Center
 Gonzalez Design Engineering
 Grand Haven Stamped Products
 Greening Testing Laboratories
 Guardian Automotive Systems
 Hayes Lemmerz International
 Technical Services
 Hi-Lex Automotive Center
 HP Pelzer Automotive Systems
 Hutchinson FTS
 Inergy Automotive Systems Technical Center
 Johnson Controls Automotive Systems Group
 Johnson Matthey Testing
 Karmann USA
 Loctite, Automotive Technology Center
 Lotus Engineering
 Magna Automotive Testing
 MAHLE
 MANN + HUMMEL Automotive
 McLaren Performance Technologies
 MDE International
 Metaldyne
 MGA Research
 Michigan Rubber Products
 Michigan Scientific
 Mitsubishi Motor
 Research & Development of America
 Molex Automotive
 MSX Vehicle Development and
 Engineering Center
 National Steel Technical Research Center
 Nissan Technical Center North America

OMG
 Perceptron
 Pilot Industries
 POM Group
 Pro-Tech Industries
 QED
 Ricardo
 Robert Bosch
 Saginaw Machine Systems
 Siemens VDO Automotive
 North American Technical Center
 SLP Engineering
 Solvay Engineered Polymers,
 Automotive Applications Development Center
 Specialized Vehicles
 STM Power
 Subaru Research and Development
 Takata
 Testing Service Group
 Textron Fastening Systems,
 Technical Resource Center
 The Budd Company
 Automotive Center
 Tower Automotive
 Technical/Customer Service Center
 US ARMY
 Tank-Automotive RD&E Center (TARDEC)
 Valeo
 Visteon Technical Center
 Yazaki North America

Branson Ultrasonics
 Burke E Porter Machinery
 Calsonic Kansei North America
 Cascade Engineering
 Climax Research Services
 Collins & Aikman,
 Global Product Development Division
 Control Power-Reliance
 Corrsys-Datron Sensorsystems
 Cosworth Technology
 DaimlerChrysler
 Delphi
 Delphi Automotive Systems Technical Center
 Denso International America
 Donnelly
 Dow Automotive
 DuPont Automotive
 Dura Automotive Systems
 Durr Industries
 Dynamic
 Eaton Innovation Center
 Entela
 Federal-Mogul
 FEV Engine Technology
 First Technology
 Automotive and Special Products
 Ford Motor
 Freudenberg-NOK
 General Motors Technical Center
 Gentex
 Gonzalez Design Engineering
 Grand Haven Stamped Products
 Greening Testing Laboratories
 Guardian Automotive Systems
 Hawtal Whiting
 Hayes Lemmerz International
 Technical Services
 Hi-Lex Automotive Center
 HP Pelzer Automotive Systems
 Hutchinson FTS
 Inergy Automotive Systems Technical Center
 Johnson Controls Automotive Systems Group
 Kaiser Aluminum

PRODUCT DEVELOPMENT

AFL Automotive
 Altair Engineering, Inc
 Analytical Process Systems
 Autoliv
 Automotive Technologies International
 Aztec Manufacturing
 BASF
 Borg-Warner Air Fluid Systems
 BOS Automotive
 Bosch Rexroth

PRODUCT DEVELOPMENT CONTINUED

Karmann USA
 Lotus Engineering
 Magneti Marelli North America
 MAHLE
 MANN + HUMMEL Automotive
 McLaren Performance Technologies
 Metaldyne
 Michigan Rubber Products
 Mitsubishi Electric Automotive America
 Mitsubishi Motor
 Research & Development of America
 Modern Body Engineering
 Molex Automotive
 MSX Vehicle Development and
 Engineering Center
 National Steel Technical Research Center
 Nissan Technical Center North America
 NSK
 Ogihara America
 OMG
 Perceptron
 Pilot Industries
 POM Group
 Pro-Tech Industries
 QED
 RECARO North America
 Ricardo
 Robert Bosch
 Sachs Automotive of America
 Saginaw Machine Systems
 Saturn Electronics & Engineering
 Siemens VDO Automotive
 North American Technical Center
 SLP Engineering
 Soudronic Automotive
 Specialized Vehicles
 Stabilus
 STM Power
 Subaru Research and Development
 Textron Fastening Systems,
 Technical Resource Center
 The Budd Company
 Automotive Center
 Tower Automotive
 Technical/Customer Service Center
 Toyota Technical Center USA
 TRW Automotive
 US ARMY
 Tank-Automotive RD&E Center (TARDEC)
 Valeo
 Visteon Technical Center
 Yazaki North America



SPECIAL SERVICES

Companies in this index are grouped according to the additional or special services they offer. Categories include:

- Consulting
- Testing facilities
- Facilities available for outside use

CONSULTING

Altair Engineering
 Analytical Process Systems
 Bosch Rexroth
 Bruel & Kjaer
 Clark Engineering Services
 Climax Research Services
 Control Power-Reliance
 Defiance Testing & Engineering
 Delphi Automotive Systems Technical Center
 Dow Automotive
 DuPont Automotive
 Durr Industries
 Dynamic
 FEV Engine Technology
 Freudenberg-NOK
 Gates Automotive Technical Center (GATC)
 GKN Automotive
 Gonzalez Design Engineering
 Guardian Automotive Products
 Hantech
 Hawtal Whiting
 HP Pelzer Automotive Systems
 Husky Injection Molding Systems
 Inergy Automotive Systems Technical Center
 Karmann USA
 McLaren Performance Technologies
 Mechanical Simulation
 Michigan Scientific
 MSX Vehicle
 Development and Engineering Center
 Munro & Associates
 National Steel Technical Research Center
 North American Lighting
 Ogihara America
 QED
 QQC
 Ricardo
 Saginaw Machine Systems
 Solvay Engineered Polymers,
 Automotive Applications Development Center
 United States Steel Automotive Center

TESTING FACILITIES

Autoliv
 AVL Powertrain Engineering
 Bruel & Kjaer
 Calsonic Kansei North America
 Cascade Engineering
 Collins & Aikman,
 Global Product Development Division
 Control Power-Reliance
 Defiance Testing & Engineering
 Freudenberg-NOK
 Grand Haven Stamped Products
 Greening Testing Laboratories
 Hantech
 Hayes Lemmerz International
 Technical Services
 HP Pelzer Automotive Systems
 Inergy Automotive Systems Technical Center
 Magna Automotive Testing
 MAHLE
 McLaren Performance Technologies
 MDE International
 MGA Research
 Ogihara America
 OMG
 Paragon Laboratories
 Siemens VDO Automotive
 North American Technical Center
 Testing Service Group
 Textron Fastening Systems,
 Technical Resource Center
 Yazaki North America

FACILITIES AVAILABLE FOR USE

Bosal International North America
 Calsonic Kansei North America
 Climax Research Services
 Delphi Automotive Systems Technical Center
 Hantech
 Hawtal Whiting
 MDE International
 US ARMY
 Tank-Automotive RD&E Center (TARDEC)
 Yazaki North America

CONTACT INFORMATION

WEB LINKS TO THE R&D DIRECTORY:

To access the current online version of the Michigan Automotive Research and Development Directory, go to one of the following sites:

Michigan Economic Development Corporation

www.michigan.org

- Click on *Business Services*
- Select *Reports and Publications* from the Locate menu

The Center for Automotive Research home page at:

www.altarum.org/car/carhome.asp

- Once there, scroll down to *Recent Publications*

UPDATE INFORMATION

This directory contains a listing of companies who have automotive related Research and Development (R&D) facilities within the State of Michigan. The on-line version of this directory will be periodically up-dated. If you would like to include your company or make changes please contact:

Center for Automotive Research at Altarum Institute

Kim Hill

ph: 734-302-4750

fx: 734-662-57366

e-mail: kim.hill@altarum.org

MICHIGAN AUTOMOTIVE PARTNERSHIP MEMBERS

American Axle & Manufacturing, Inc
Atlas Tool, Inc
Autocam Corporation
Aztec Manufacturing
Bell Engineering, Inc
Benteler Automotive Corporation
Bing-Lear Manufacturing Group
Brown Corporation of America, Inc
Chivas Industries LLC
DaimlerChrysler Corporation
Delphi Automotive Systems
Denso International America, Inc
Donnelly Corporation
Emhart Automotive
Ford Motor Company
Freudenberg-NOK
General Motors Corporation
Gentex Corporation
Gilreath Manufacturing, Inc
Gonzalez Design Engineering Company

Grand Haven Stamped Products Company
Guardian Industries Corporation
II Stanley Co, Inc
Johnson Controls, Inc
KUKA Flexible Production
Systems Corporation
Lenawee Stamping Corporation
Means Industries, Inc
Michigan Rubber Products, Inc
MSX International
Ogihara America Corporation
Olofsson PCC Speciality Products, Inc
Paragon Die and Engineering Co
Peterson Spring
Robert Bosch Corporation
Saturn Electronics & Engineering, Inc
Textron Automotive, Inc
The Budd Co
Trans-Matic Manufacturing Company
TRW Automotive

*Membership as of 2002



MICHIGAN ECONOMIC DEVELOPMENT CORPORATION
300 N WASHINGTON SQUARE, LANSING, MI 48913
517.373.9808 • WWW.MICHIGAN.ORG
MICHIGAN AUTOMOTIVE PARTNERSHIP IS AN MEDC ROUNDTABLE



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734.302.4600 • WWW.ALTARUM.ORG