



# THE TEXAS AUTOMOTIVE MANUFACTURING INDUSTRY

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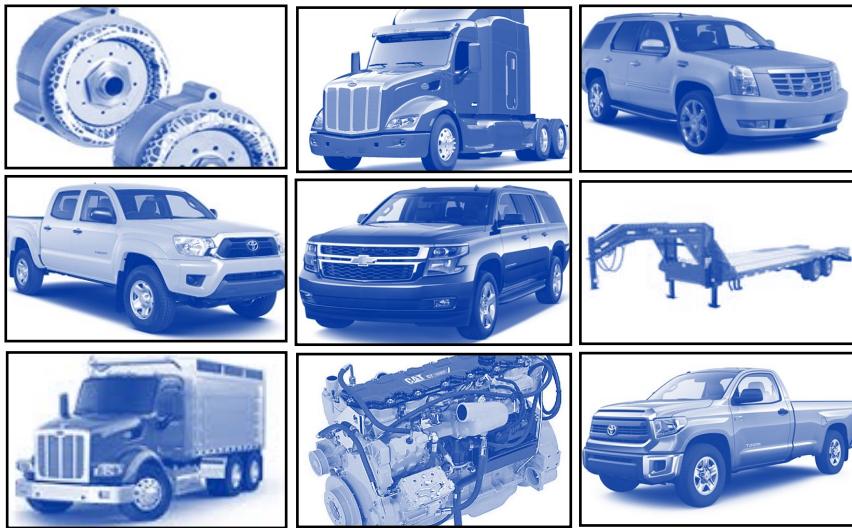


**GO**  
**BIG**  
IN TEXAS

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*The report's cover photos above are courtesy of the companies.*

*From top left: Toshiba HEV motor, Peterbilt Model 579 truck, Cadillac Escalade, Toyota Tundra, Chevrolet Suburban, Load Trailer gooseneck trailer, Peterbilt Model 567 truck, Caterpillar C7 truck engine, Toyota Tacoma*

# Texas Auto Manufacturing Headlines



**Toyota selects Texas for its new U.S. headquarters**

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**General Motors Arlington assembly plant celebrates 60 years**



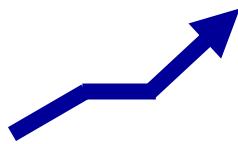
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**Toyota announces two new Texas auto suppliers, ASI and Forma Automotive**



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**Jobs in Texas auto manufacturing sector surge over 29% since 2010**



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**Caterpillar to close South Carolina plant, move C7 engine assembly line to Texas**



*See Page 22*

**Texas automotive exports jump 49% over past five years**



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**Peterbilt celebrates 75 years in Denton, Texas**



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**Texas ranks No. 7 nationally for automotive manufacturing employment**



*See Page 3*

# Automotive Manufacturing in Texas



Texas is home to a well-established automotive manufacturing sector that, unlike in many other states, has continued to grow in the 21st century. A right-to-work state, Texas is nationally ranked in the top ten for automotive manufacturing employment and establishments, the size of its vehicle retail market, and the number of vehicle registrations. Texas is also part of the growing NAFTA auto corridor, where billions of dollars of assembled vehicles and auto parts are shipped between Mexico and the Lone Star State.

The state is home to two major passenger vehicle assembly plants, operated by global leaders General Motors (GM) and Toyota. GM's Arlington plant has operated for 60 years and currently produces SUVs, while Toyota began production of full-size pickups at its San Antonio plant in 2006.

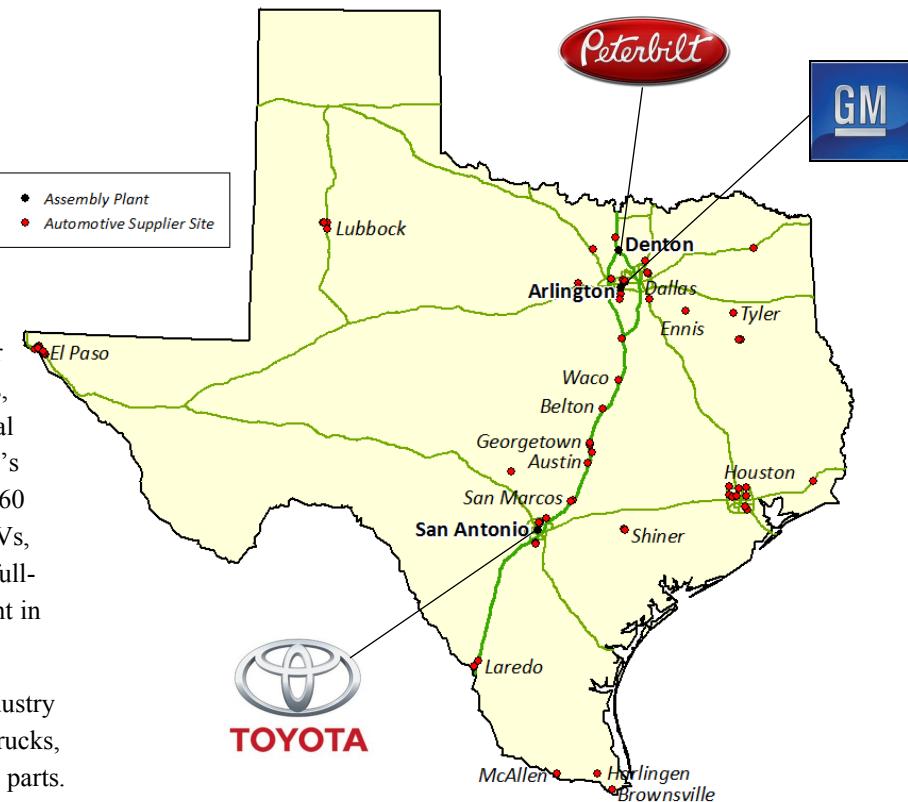
The automotive manufacturing industry encompasses makers of cars and trucks, motor vehicle bodies, and auto parts.

These sectors include the assembly of complete cars and trucks, as well as the manufacturing of motor vehicle frames, chassis, cabs, utility trailers, military vehicles, and automotive gasoline engines. The U.S. government's North American Industry Classification System (NAICS) classifies the auto industry under the following categories:

## Automotive Manufacturing Sectors

- Motor Vehicle Manufacturing/Assembly
- Motor Vehicle Body & Trailer Manufacturing
- Motor Vehicle Parts Manufacturing

## Major Automotive Manufacturers in Texas



## Auto Manufacturing Workforce

Although it is outside the traditional automotive belt of the Midwest and Southeast, Texas is currently one of the top ten states in the U.S. by number of automotive workers and number of auto manufacturing establishments. More than 466 automotive manufacturing firms directly employ over 35,800 workers in Texas. Workers at these companies earn an average of around \$58,700 annually (see table below).

**Texas ranks No. 7 nationally for automotive manufacturing employment**

- U.S. Bureau of Labor Statistics (2012)

Employment has increased steadily over the past four years, growing over 23.6% from 2010 to 2014 (see chart on page 3).

The table below provides a snapshot of employment in the Texas automotive manufacturing industry in the first quarter of 2014. The motor vehicle parts manufacturing sector accounts for 45% of the state's automotive manufacturing employment (see chart at right).

### Top Automotive Manufacturing Employers In Texas (2013)

- 1 General Motors (Arlington): 4,500+
- 2 Toyota (San Antonio): 2,900
- 3 Peterbilt Motors: 2,200
- 4 Toshiba International Corp. 2,000
- 5 Caterpillar (Engine Assembly): 1,160

### Texas Automotive Manufacturing Employment, by Sector

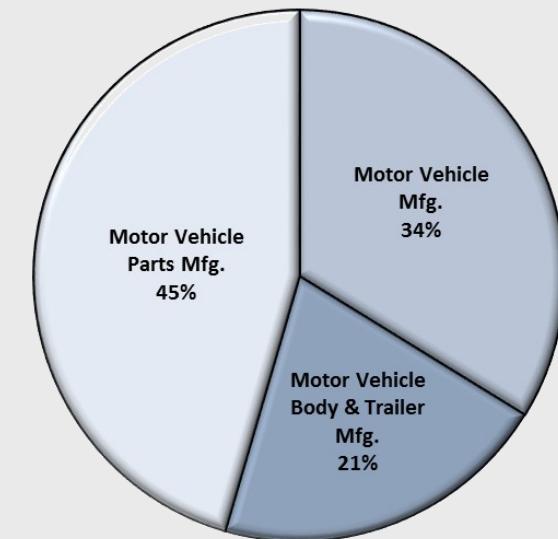


Chart Source: Texas Workforce Commission

### Automotive Manufacturing Employment in Texas

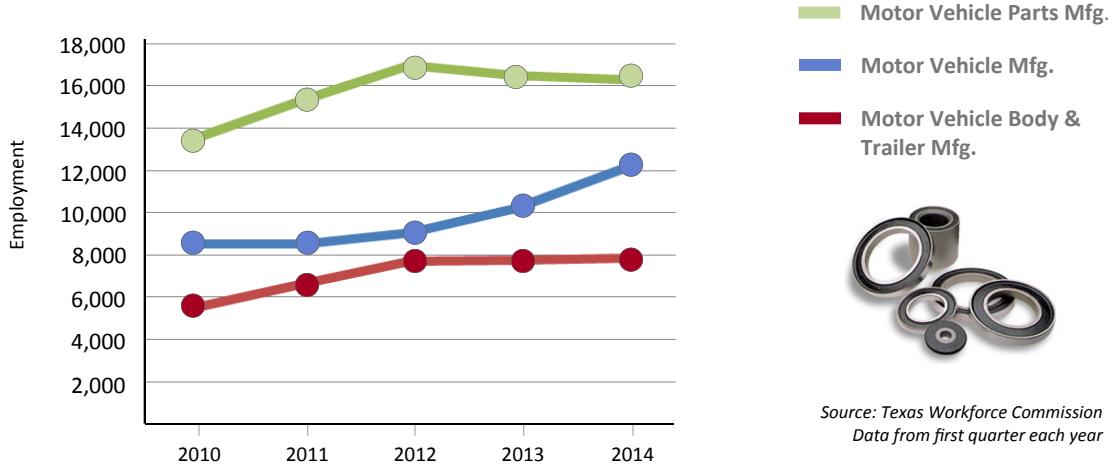
2014 First Quarter

Sector (Industry Code)	Employees	Firms	Average Annual Wage
Motor Vehicle Manufacturing (3361)	12,096	29	\$75,752
Motor Vehicle Body & Trailer Manufacturing (3362)	7,424	168	\$41,392
Motor Vehicle Parts Manufacturing (3363)	16,288	269	\$53,300
<b>TOTALS</b>	<b>35,808</b>	<b>466</b>	<b>\$58,753</b>

Source: Texas Workforce Commission

## OVERVIEW

### Five-Year Trends: Texas Automotive Manufacturing Employment, 2008-2012



In 2012, Texas ranked No. 5 nationally for automotive manufacturing establishments and No. 7 nationally for automotive manufacturing employment (see table to right).

Between 2010 and 2014, overall employment in the Texas automotive manufacturing industry increased steadily, as the national and global recession receded and the national automotive manufacturing industry rebounded (see chart above). Among the three subsectors of the Texas automotive manufacturing industry, the motor vehicle manufacturing sector has led the way with employment gains of more than 29.4% since 2010. Motor vehicle body & trailer manufacturing employment during the same period saw gains of 28.9%, while motor vehicle parts manufacturing employment increased by 16.7%.

The motor vehicle manufacturing sector has increased employment over 29.4 % since 2010

### Texas Ranks No. 7 in the U.S. in Total Auto Manufacturing Employment

Michigan	150,169
Indiana	96,732
Ohio	88,013
Tennessee	48,465
Kentucky	45,301
Illinois	33,843
Texas	33,776

Source: U.S. Bureau of Labor Statistics

## Research & Development

From electronics to fuel economy to tire performance, a wide range of automotive technologies are developed and tested by Texas companies.

### Automotive Semiconductors

Dallas-based electronics giant **Texas Instruments** designs semiconductors for a range of automotive applications, including body electronics, power trains, hybrid chargers, brakes, and infotainment systems.

**Freescale Semiconductor**, based in Austin, has designed and manufactured automotive semiconductors since the 1950s. As one of the world's leading suppliers of automotive processors, microcontrollers, and sensors, Freescale's technology is utilized in many new vehicles, including GM's Texas-built hybrid SUVs. Freescale has been a GM supplier for nearly 30 years.

**Spansion**, based in California with a major manufacturing site in Austin employing about 860, expanded its share of the automotive market with the 2014 debut of its Traveo line of microcontrollers for electric and hybrid vehicles. Spansion's ARM-based dual-core chips are designed to be used for electric vehicles, battery management, air conditioning and heating systems, and automotive displays.

Multiple smaller semiconductor firms in Texas also supply the auto industry. These firms include **SMSC**, which develops and supplies microelectronics for automotive multimedia systems at its Austin, design center, and **Silicon Labs**, an Austin-based industry leader in the development of mixed-signal integrated circuits optimized for automotive applications.

### Automotive Test Facilities

Near Fort Stockton, Texas, midway between El Paso and San Antonio, lies **Bridgestone Americas' Texas Proving Ground** (TPG). Established in 1955, TPG is more than 6,000 acres of flat land that features a variety of test tracks and driving environments, where tires and vehicles can be tested in real-life conditions.



German manufacturer **Continental Automotive Systems** operates a state-of-the-art test track facility in Uvalde, Texas. The 5,000-acre Uvalde Proving Grounds' rural location, combined with high security, make it ideal for testing top secret components and vehicles for ride, handling, durability, and more. The facility was originally built by General Tire in 1959.



Also located in West Texas, the **Goodyear** Tire Proving Grounds near San Angelo, provides the leading tire maker with product test facilities. Built in 1957, the 7,000-acre site is one of only three proving grounds Goodyear operates in the U.S.



In Laredo, Texas, a 2,000-acre facility owned by German firm **MBTech Group** offers a variety of special tracks and surfaces for vehicle and tire testing. The company is a joint subsidiary of AKKA Technologies, an industrial research and development firm based in France, and Daimler, the German parent company of Mercedes-Benz.



The **Texas A&M Transportation Institute** owns and operates the Proving Grounds Research Facility, a 2,000-acre complex where researchers test vehicles for all kinds of clients and a wide spectrum of vehicles, ranging from subcompacts to tractor-trailer rigs. The facility performs crash tests and also tests roadside safety devices.



## OVERVIEW

### San Antonio Institute Puts Automotive Technologies to the Test

The Southwest Research Institute (SwRI), headquartered in San Antonio, Texas, is one of the nation's oldest and largest independent, nonprofit, research and development organizations. Employing over 2,800, the institute occupies over two million sq. ft. of laboratories, test facilities, and offices. Its 2013 revenues exceeded \$592 million.

SwRI's world-class **Office of Automotive Engineering** coordinates operations with automotive clients. Among these operations is the **Engine, Emissions and Vehicle Research Division**, which designs and tests a wide range of automotive technologies, including powertrains, fuel cells, and diesel systems. The **Fuels and Lubricants Research Division** helps clients get automotive component and fluid products to market and improve them during their lifespan. Additionally, SwRI's **Automotive Fleet Testing program** provides comparative data for vehicle performance under actual operating conditions.



*Automotive fuel performance evaluation*

SwRI currently operates seven automotive industry consortia to support its clients, as well as the U.S. Army TARDEC (Tank Automotive Research Development & Engineering Center) Fuels and Lubricants Research Facility, a government-owned facility in operation since 1957. The institute also maintains automotive operations abroad in India and in China through the Tianjin-based **SwARC Automotive Research Laboratory**, a joint venture with state-owned China Automotive Technology and Research Center (CATARC).

### R&D Credit Regulation

In June 2013, Gov. Rick Perry signed HB 800 into law, reinstating the **R&D tax credit** for Texas companies. Both the sales tax exemption and research credit are extended through 2026 and are expected to be a boost to Texas manufacturing and high-technology industries, including automotive. The law went into effect in January 2014.

HB 800 reinstates franchise tax credits for companies conducting qualified research activities (QRAs) within the state. The new law provides Texas companies the option of selecting either a sales tax exemption on property purchased by persons engaged in QRAs or the franchise tax credit, but not both.



*Engine oil oxidation testing at SwRI*

## The Texas-Mexico Automotive Corridor

Sharing the longest border with Mexico of any U.S. state, Texas is uniquely positioned for international trade with this significant emerging market in the global automotive industry. Billions of dollars in automotive goods are shipped from Texas annually.

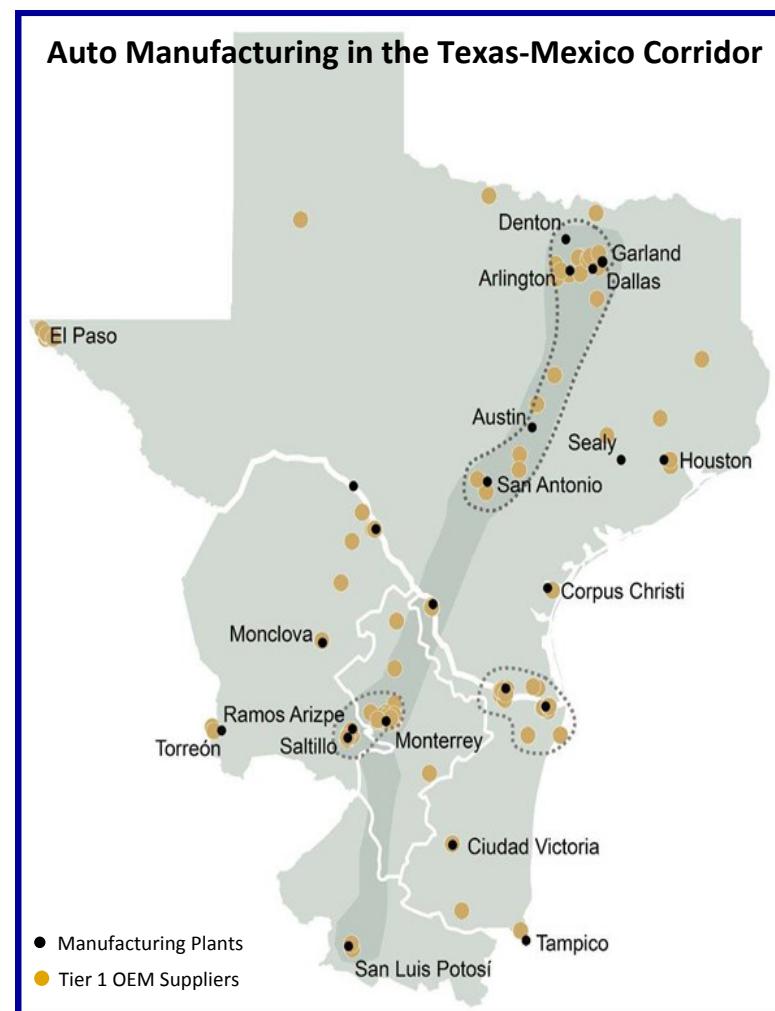
**Texas serves as a primary link between Mexico's auto plants and the rest of the U.S. auto industry**

Texas has become an important part of the realigned North American “auto alley,” now running north from Mexico through a number of southern U.S. states, to the Midwest rust belt. The traditional U.S. auto corridor radiating from Detroit has rapidly shifted toward the U.S. South since the 1980s. Almost all the North American automotive plants built in the last two decades were located in a southern U.S. state or Mexico. Many foreign-owned automotive firms, such as Toyota, Nissan, Subaru, Volkswagen, Mercedes-Benz, BMW, and Kia, have located their operations in southern right-to-work states, away from the traditional center of U.S. automotive manufacturing.

Spurred by the 1992 North American Free Trade Agreement (NAFTA), Texas serves as a primary link between Mexico’s automotive plants and the rest of the U.S. automotive industry. The “NAFTA superhighway,” which runs through Texas as Interstate 35, serves as a main artery for the southern U.S. and northern Mexico’s auto manufacturing industry. The region’s large, skilled, and cost-effective labor pool, coupled with the NAFTA provision that qualifies any product with at least 62.5% American,

Mexican, or Canadian parts to be duty-free, has made Texas a highly competitive location for automotive manufacturers. The shaded region on the map below represents the NAFTA superhighway corridor.

NAFTA’s impact is evident in northeastern Mexico’s growing automotive cluster, located near the border of Texas. Manufacturers with facilities in this region of Mexico include GM, Toyota, Peterbilt, Freightliner, and Navistar International. Some of these firms also have facilities in Texas, which are detailed on the map on page 1 of this report.



## OVERVIEW

# Foreign Trade & Logistics

In 2013, Texas ranked as the No. 3 state for transportation equipment exports, with a value of over \$24.4 billion, according to the U.S. Census Bureau. NAFTA partners Mexico and Canada were the top two destinations for Texas transportation exports.

Over the past five years, Texas automotive exports have increased almost 49% from around \$9.2 billion in 2009 to over \$18.1 billion in 2013. Two of the

**Over the past 5 years,  
Texas automotive  
exports increased 49%**

three major motor vehicle manufacturing segments grew during this period (see chart below), despite the 6%

decrease in the motor vehicle manufacturing segment between 2012 and 2013. Motor vehicle parts is the largest of the three segments and experienced the strongest growth, increasing 50.6% from over \$5.8 billion in 2009 to over \$11.8 billion in 2013.

In 2013, Texas ranked No. 3 nationally for transportation equipment imports, with a value of over \$27.1 billion, according to the U.S. Census Bureau. Mexico

## Hisun Motors selects McKinney for New N.A. Headquarters

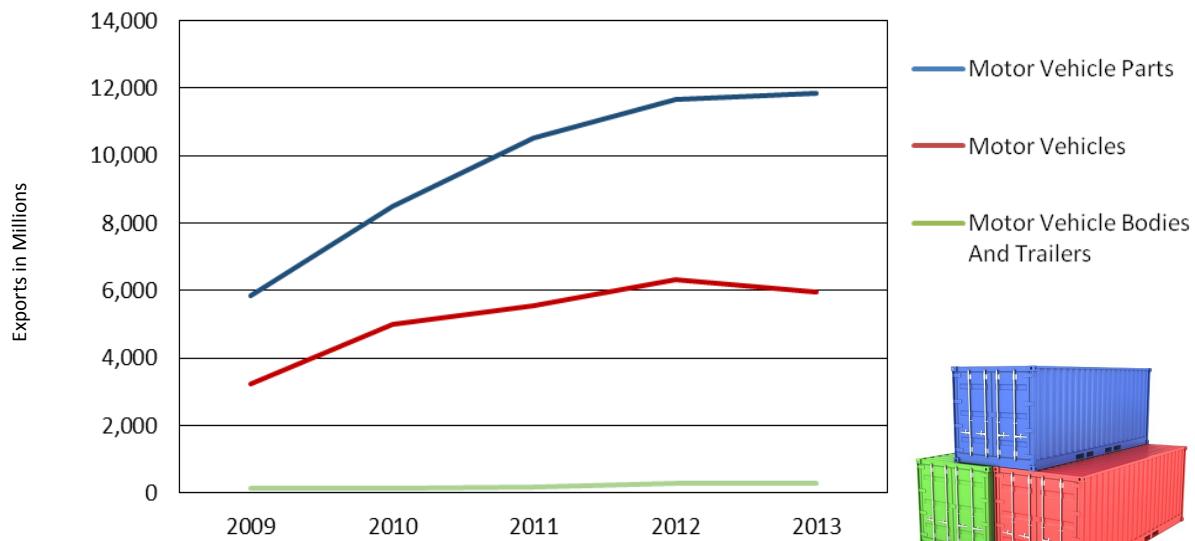
In April 2014, China-based **Hisun Motors Corp. USA** announced plans to open its North America (N.A.) headquarters in McKinney, Texas. The company expects the move to create about 80 jobs, in addition to the existing jobs in a service center that opened in Carrollton, Texas in 2006.

Hisun Motors is the sixth largest manufacturer of utility-terrain vehicles (UTVs) and all-terrain vehicles (ATVs) in the U.S. and Canada, distributing them via outlets like Cabela's and Wal-Mart using the brand name HISUN.



and Germany were the top two countries importing transportation equipment into Texas.

## Five Year Trends: Texas Automotive Exports, 2009-2013



Source: U.S. Census Bureau, Foreign Trade Division



## Texas Attracts Automotive Investment from around the World

**Selected foreign companies with automotive related operations in Texas:**



### China

- **Hisun:** McKinney



### Germany

- **Auto Kabel:** El Paso
- **BMW:** Lancaster, Statewide locations
- **Continental AG:** Seguin
- **Hilite Intl:** Carrollton



### Japan

- **Fujitsu:** McAllen
- **JTEKT:** Ennis
- **Sanden:** Wylie
- **Sumitomo Electric:** San Antonio, El Paso
- **Takata:** San Antonio
- **Toyoda Gosei:** San Antonio
- **Toyota:** San Antonio, Plano
- **Toyotetsu:** San Antonio



### Korea

- **Samsung:** Austin



### Sweden

- **Stoneridge Electronics:** El Paso
- **Scania AB:** San Antonio



### Switzerland

- **HOERBIGER:** Garland



### United Kingdom

- **Hilite:** Carrollton
- **Orbital Traction:** Houston

## BMW Opens \$50 Million Distribution Center in Lancaster

In January 2014, BMW's \$50 million regional parts distribution center in Lancaster, Texas, officially opened. The new 282,000 sq. ft. Dallas-Fort Worth area distribution center replaces BMW's regional distribution center in Mississippi, giving New Jersey-based BMW of North America LLC the ability to respond to the growing southern region of the country. The center will employ about 100 and distribute parts to BMW dealerships in Texas, Louisiana, Arkansas, Oklahoma, and Mississippi.



Germany-based **BMW Group** is a major global automotive manufacturer, distributing BMW, Mini, and Rolls-Royce vehicles worldwide.

## OVERVIEW

# State Government Initiatives

## Business Incentive Programs

In 2003, the Texas Legislature created the \$295 million Texas Enterprise Fund (TEF), a “deal-closing” fund created to attract businesses and new jobs to the state when Texas is in competition with another state or country. The TEF was most recently reappropriated in 2013. To date, nearly \$50.5 million from the

TEF have been awarded for automotive manufacturing - related projects. The TEF table below details these projects and the 5,985 jobs they have committed to create.

In 2005, the Texas Legislature created the \$200 million Texas Emerging Technology Fund (TETF) to promote and finance innovations across multiple industries, including advanced manufacturing. The TETF table below lists the program’s \$6.6 million in awards to automotive technology-related companies since the program’s inception.

Texas Enterprise Fund Automotive Manufacturing-Related Awards				
Company	City	Project	Jobs	Award (Millions)
Caterpillar	Seguin	Engine assembly, test & painting	1,714	\$8.5
CK Technologies	Brownsville	Truck component manufacturing	121	\$.425
Continental Automotive Systems	Seguin	Auto sensors and actuators mfg.	300	\$1.2
JTEKT Automotive	Ennis	Auto parts mfg. plant expansion	200	\$.333
Toyota Motor N.A.	Plano	Auto HQ relocation	3,650	\$40.0
<b>TOTALS</b>	—	—	<b>5,985</b>	<b>\$50.46</b>

Texas Emerging Technology Fund Automotive Manufacturing-Related Awards			
Company	City	Technology	Award (Millions)
ActaCell	Austin	Rechargeable lithium-ion batteries	\$1.0
Falcon International	Odessa	Military vehicle retrofitting	\$.85
KLD Energy Technologies	Austin	Motor systems for electric vehicles	\$2.8
Turbo Trac Systems	Midland	Infinitely variable transmissions	\$2.0
<b>TOTALS</b>	—	—	<b>\$6.6</b>

## Vehicle Registrations

Texas ranks No. 2 nationally for number of registered motor vehicles. In 2013, the state was home to over 23.2 million registered vehicles, according to the Texas Department of Motor Vehicles (DMV). Approximately 55% were passenger vehicles, which includes cars, mini-vans, and most SUVs, while 25% were pickup trucks (see adjacent table). Also in 2013, Texas registered more than 1.31 million new vehicles, up from 1.23 million in 2012.

Texas Vehicle Registrations				
Fiscal Year	Passenger Vehicles <sup>1</sup>	Pick-Up Trucks <sup>2</sup>	Other Vehicles	Total
2011	11,832,416	4,920,874	5,186,496	21,939,786
2012	12,378,139	5,777,174	5,149,019	22,618,153
2013	12,818,065	5,854,158	4,554,809	23,227,032

<sup>1</sup> Includes automobiles, mini-vans, and most SUVs.

<sup>2</sup> Source: Texas DMV

<sup>2</sup> Includes ½, ¾, and 1 ton trucks.

# Passenger Vehicles



Producing some of the nation's most popular and best-selling models, Texas is also a top market for automobiles, including full-sized trucks and SUVs. In 2013, nearly one in four new vehicles registered in Texas was a full-sized pickup. The state nationally ranked No. 1 for pickup and No. 2 for SUV registrations in 2012, the latest data available, and has earned the nickname "Truck Country." According to WardsAuto, in 2013 Texas ranked No. 7 for the total number of light trucks manufactured, including SUVs, with over 507,300 units.

GM celebrated **60 years** of automotive manufacturing in Texas in 2014 and boosted its **Arlington assembly plant's** production to record levels

In the U.S., the world's second largest automotive market, manufacturers have increasingly focused on the high-profit pickup and SUV segments. Profit margins on these vehicles is estimated at \$5,000 to \$10,000 per vehicle. Since the 1990s, these vehicles have accounted for a significant portion of U.S. sales for major automakers. Two global leaders, GM and Toyota, operate assembly plants in Texas to build trucks and SUVs. In the late 1990s, while designing the full-sized Tundra pickup, Toyota engineers studied

the Texas truck market, then, due to its segment dominance, decided to set up manufacturing operations in Texas.

## General Motors

GM's Arlington, Texas, plant is the company's only remaining U.S. plant building full-sized SUVs. These vehicles are among the company's most profitable vehicles, including the iconic Chevrolet Suburban, which some call "the national car of Texas." GM's full-size SUVs dominated the nation's market segment with a 75% share in 2013. The company has benefitted from increasing U.S. SUV/light truck sales, as the segment rose to over 50% of the total light vehicle (LV) market (defined as cars and SUVs/light trucks) in 2013, according to Autodata.

The GM Arlington, Texas plant celebrated its 60th year of operation this year. The plant has won a number of quality awards since opening in 1954; nonetheless, in early 2009 the plant was shut down for

### GM Arlington Fact Sheet

- Expanded eight times since opening in 1954
- Occupies 4.37 million sq. ft. on 250 acres of land
- Approximately 1,200 vehicles are produced daily
- Produced over 278,346 new Tahoes, Suburbans, Yukons, and Escalades in 2013
- Employs approximately 4,500 (hourly and salaried)
- Operates three 8-hour production shifts
- Annual payroll of over \$220 million
- Company investment of over \$1.4 billion since 1995



## PASSENGER VEHICLES

### GM Celebrates 60 Years of Auto Manufacturing in Texas

In May 2014, the GM Arlington Assembly Plant celebrated its 60th anniversary with Governor Rick Perry and other dignitaries in attendance. The



plant began car manufacturing in 1954, switching to SUV assembly in 1997. It is the only U.S. factory building GM's award-winning, full-size SUVs.

From 1954 through 2013, GM's Texas plant built over 9.7 million vehicles and grew from 1.25 million sq. ft. to a 4.37 million sq. ft. facility. That includes GM's \$200 million, 300,000 sq. ft. stamping plant, which opened in October 2013. The new plant is produc-

ing auto parts that are used to manufacture in Texas, saving the company an estimated \$40 million a year in supply costs.

GM employs a total of over 5,000 employees in Texas, including GM Financial locations in the Fort Worth area, two Texas-based Customer Call Centers, and IT operations in Austin.



GM's Arlington Assembly Plant Photo courtesy of GM

two months, along with 12 other North American GM plants, because of company-wide financial problems. During this shutdown, GM filed for Chapter 11 bankruptcy, restructured, and reemerged as a leaner firm focused on its core brands: Chevrolet, GMC, Cadillac, and Buick. The carmaker returned to profitability in 2010 for the first time since 2004, and has reported positive revenues since then. However, in the past two years, the company has recalled millions of vehicles, including Arlington manufac-

tured SUVs, and been embroiled in national controversy over defective ignition switches on compact models. GM remained the No. 1 U.S. automaker in 2013 by sales volume, with 17.9% market share, and was ranked the world's No. 2 automaker with 11% global market share.

GM Arlington added a third shift in 2013 to boost production, operating 24 hours/weekday. In July 2014, the plant began operating on weekends to meet the demand for full-sized SUVs. In early 2014, GM ceased production of its SUV hybrids due to low demand; however, the Arlington plant plans to add police and other commercial SUVs this year.

Over the years, GM's Texas-built vehicles have garnered numerous industry awards, including the 2013 J.D. Power & Associates Initial Quality Survey, where the Cadillac Escalade ranked No. 1 in the Large Premiere Crossover/SUV segment and the Chevrolet Tahoe ranked No. 1 in the Large Crossover/SUV segment.



2014 GMC Yukon, Chevy Suburban, Chevy Tahoe, and Cadillac Escalade

## Toyota

In October 2013, Toyota celebrated its San Antonio, Texas truck assembly plant's 10th anniversary and its one millionth truck to be built there. Toyota officials initially announced that San Antonio was selected as the site of the newest Toyota truck assembly plant in

**Toyota's entire U.S. pickup production is in Texas**

2003. A \$133 million state incentive package was extended to Toyota, including \$27 million for job training and recruitment and \$15 million for

the rail district to build a second rail line to the site. The Toyota Motor Manufacturing Texas (TMMTX or Toyota Texas) plant officially opened its \$1.28 billion dollar plant and began production of its Tundra full-sized pickups in November 2006. The plant is expected to add \$2.4 billion to the Texas economy through 2016.

TMMTX established a new benchmark for the Toyota Production System: a network of 21 parts and components suppliers that are integrated on site (see page

### Toyota Texas Fact Sheet

- Opened in 2006 and expanded in 2010
- Occupies 2.2 million sq. ft. on 2,000 acres
- Produced 122,583 Tundra and 106,400 Tacoma pickups, for a total of 228,983 trucks in 2013
- Employs approximately 2,900 workers
- On-site suppliers employ approximately 3,150 additional workers
- Operates 2 production shifts
- \$2.3 billion in capital investment to date



### Toyota Moving North America Headquarters to Plano

In April 2014, Gov. Rick Perry announced a Texas Enterprise Fund award of \$40 million to

**Toyota Motor North America (N.A.)** to consolidate its three separate N.A.

headquarters (HQ) for manufacturing (Kentucky), sales (California), and marketing and corporate operations (New York) to a new, state-of-the-art campus in Plano,

Texas. The investment will create nearly 4,000 new jobs and over \$300 million in capital investment. Separately, Toyota Financial Services, currently based in California, also announced it will move its HQ to Plano.



"Over the past decade, Texas and Toyota have developed a strong partnership that has resulted in good-paying jobs for thousands of Texans," Texas Gov. Rick Perry said. "We're proud that both the Tundra and Tacoma bear the words 'Made in Texas,' and we're excited our state will be the nexus for Toyota's North American operations moving forward."

15) to achieve quality and environmental improvements. TMMTX was the first automotive assembly plant to co-locate supplier parts-production facilities with the main assembly plant.

Toyota's entire U.S. pickup truck production now takes place in San Antonio. Toyota consolidated all Tundra truck production in Texas in 2009, when it ceased production at an Indiana plant. Additionally, Tacoma pickup production was moved to TMMTX in July 2010, ending production in California. The transfer of Tacoma pickup production to San Antonio represented \$100 million in new direct investment and about 1,000 new direct jobs.

After two years of reduced production due to the

## PASSENGER VEHICLES

global recession, Toyota product recalls, and an earthquake which disrupted Toyota's supply chain, TMMTX increased truck production to a record-setting 228,983 units in 2013 and is experiencing increasingly high demand. Toyota was the No. 3 U.S. automobile manufacturer by vehicle sales in 2013, with 14.3% market share, and was ranked No. 2 globally with 12% market share.

The Tacoma ranked No. 5 and the Tundra ranked No. 6 as the best-selling U.S. pickup trucks in 2013, both for the second year in a row. The Tundra has won numerous awards over the years, including the No. 1

spot in the large pickup segment of IntelliChoice's Best Overall Value of the Year awards since 2011. The Tacoma has been named the nation's best-selling compact pick-up truck every

year since 2005. In 2013, the Tacoma held about 70% of the U.S. compact truck market, up 20% from 2012.



2014 Toyota Tacoma and Tundra

### Toyota Texas Welcomes Two New On-site Suppliers

In September 2014, Toyota Texas officially announced the addition of two new on-site suppliers, **Arvin Sango Inc. (ASI)** and **Forma Automotive LLC**. Each company plans on hiring about 50 workers by mid-2015.

Forma Automotive is owned by Rosa Santana, making it the first direct tier 1, Hispanic woman-owned supplier for Toyota. The company will assemble Tacoma truck beds inside the Toyota plant, while ASI, a exhaust systems supplier, will operate from a new facility next to the Toyota Texas plant.

### Toyota Suppliers Invest \$21 Million in San Antonio

In early 2014, two Toyota parts suppliers filed plans to invest a combined total of over \$21 million to build new manufacturing facilities at TMMTX.

**Toyotetsu Texas**, an existing supplier, plans to invest \$4.7 million to add manufacturing space to its existing facility at the Toyota plant.

**TOYOTETSU**

**Arvin Sango Inc. (ASI)**, an Illinois-based mufflers supplier, plans to spend \$16.6 million to build a new manufacturing facility at TMMTX and create at least 45 new jobs in Texas.



The two TMMTX supplier projects should be completed by January 2015. They underscore the success of Toyota's innovative on-site parts supplier model.



Joe DaRosa, Toyota Texas president, welcomes Rosa Santana, Owner, President and CEO of Forma Automotive  
Photo courtesy of Toyota

## Toyota Texas' On-Site Suppliers

Toyota Texas operates an innovative on-site supplier network, integrating separate parts and components suppliers into the same production campus. The company was the first automotive assembly plant to co-locate supplier production facilities alongside the main assembly plant. In addition to this group, Toyota has many other suppliers located throughout Texas and the world.

See page 15 for a full list of the 23 on-site suppliers to Toyota Texas.



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## The Texas Pickup Market

As standard equipment for many small businesses and contractors, truck sales are often viewed as an indicator of the nation's economic health. In 2013, national pickup sales increased for a fourth consecutive year, accounting for just over 50% of the light vehicle market, according to *The Detroit News*.

In fiscal year 2013, Texas was home to over 5.8 million registered pick-up trucks, representing over 25% of all the state's total registered vehicles, according to the Texas Department of Motor Vehicles

In 2013, Texas accounted for almost **15%** of the nation's new, full-sized pickup market

(DMV). The adjacent table provides details on total Texas pickup truck registrations from the last three years.

More than 315,730 full-sized pickup trucks (trucks less than 1 ton) were newly registered in Texas in 2013, up more than 3.5% from 2012. Nationwide, there were 2.18 million full-sized pickups sold in 2013. Assuming that Texas' 2013 new truck registrations represent new truck sales, Texas accounted for almost 15% of the nation's new, full-sized pickup market in 2013, which is a substantial portion of the national pickup marketplace.

**Texas Pickup Truck Registrations**

Fiscal Year	Total Pick-Up Trucks Registered	Total Vehicles Registered	Pick-Ups % of Total
2011	4,920,874	21,939,786	22.4%
2012	5,090,995	22,618,153	22.5%
2013	5,854,158	23,227,032	25.2%

Source: Texas Department of Motor Vehicles

## AUTOMOTIVE PARTS

### Toyota On-Site Suppliers in San Antonio

Texas Operation Name	Joint Venture Partners	Commodity/Service
Arvin Sango Inc. (ASI)	-	Tacoma exhaust systems
Asahi Glass Automotive Americas (AGC)	-	Door glass
Avanzar Interior Technologies	SAT Auto Technologies, Ltd. & Johnson Controls, Inc.	Seats, headliners, door panels plus assembly
Curtis-Maruyasu America, Inc.	-	Fuel & brake tubes
Forma Automotive Inc.	-	Tacoma bed/deck assembly
Futaba Industrial Texas (FIT)	-	Stamped parts plus assembly
Green Metals, Inc. (GMI)	-	Metal recycling; waste management & recycling
HERO Assemblers, LLP	Valiente International Ventures & Toyota Tsusho America (TAI)	Tire & wheel assembly
HERO Logistics, LLP	Valiente International Ventures & Toyota Tsusho America (TAI)	On-site logistics & yard/dock management
Kautex	-	Fuel tanks
Metalsa	-	Truck frame sequencing
MetoKote	-	E-coating
Millennium Steel of Texas, LLC	Millennium Steel Service Indiana & TAI	Steel blanks & coils
PPG		Windshield glass
Reyes-Amtex	Reyes Industries & Amtex	Carpet
Reyes Automotive & Reyes-Amtex Automotive	Reyes Industries & Lear & Amtex	Interior/exterior parts (trim, ducts, and carpet)
Reyes-Amtex Automotive	Reyes Industries & Lear	Carpet
Takumi Stamping Texas, Inc.	-	Stamped & welded parts
Tenneco Automotive	-	Exhaust systems
Tokai Rika (TRAM)		Steering wheels & switches
Toyoda-Gosei Texas LLC	-	Interior/exterior parts
Toyotetsu Texas	-	Stamped & welded parts
Vutex, Inc.	Operational Technologies Corp. & Vuteq	Assembly services

Source: Toyota

# Heavy Duty Trucks



Peterbilt truck

Texas is home to a number of heavy duty truck manufacturers (see table below). They include one of the nation's leading firms, Peterbilt Motors, which is a division of the global heavy truck manufacturing giant, PACCAR. The state ranked No. 2 nationally for truck tractor registrations in 2012, the latest year available. Texas DMV data indicate that state registrations have increased significantly over

the past five years for two major categories of the heavy duty truck market (see table below).

## Texas Heavy Truck & Semi Truck Tractor Registrations

Year	Heavy Trucks*	Semi Truck Tractors
2009	157,473	97,826
2010	155,888	105,467
2011	157,148	119,104
2012	162,119	136,908
2013	168,517	145,557

\*Greater than 1 ton: dump trucks, garbage trucks, etc..

Source: Texas DMV

Texas heavy duty truck manufacturers produce vehicles for a variety of uses, from long-haul freight trucks to motorcoach buses to armored vehicles. Most of the manufacturing facilities are located close to major metropolitan areas, ports, and highways—including the NAFTA superhighway. The state's top heavy duty truck sector manufacturers, Peterbilt Motors, is profiled on the following page.

## Top Specialty Truck & Utility Vehicle Manufacturers in Texas By Number of Employees

Company	City	Employees	Product
Peterbilt Motors	Denton	2,200	Heavy duty trucks
Foretravel of Texas	Nacogdoches	350	Motorcoach buses
Supreme Corp. of Texas	Cleburne	320	Truck and bus bodies, armored vehicles
BrandFX Body Company	Fort Worth	300+	Utility truck bodies
RKI, Inc.	Houston	200	Service truck bodies
TYMCO, Inc.	Waco	150+	Street sweeper trucks
Capacity of Texas	Longview	150	Industrial trucks and trailers
General Truck Body Mfg. Co.	Houston	130	Specialty truck bodies
Morgan Corporation	Corsicana	100	Truck and freight van bodies
Bridgeport Manufacturing	Breckenridge	70	Refuse truck bodies

Representative samples only. Sources: D&B, LexisNexis, MNI's Texas Manufacturers Register, company data

## Peterbilt

Peterbilt Motors is one of America's premium truck manufacturers. The company has been in business since 1939 and is celebrating its **75th anniversary** this year. Headquartered in Denton, Texas, Peterbilt is a division of PACCAR, a Fortune 500 company and one of the world's largest manufacturers of heavy duty trucks. Peterbilt enjoys a global reputation for

**The Denton plant is Peterbilt's only U.S. manufacturing site**

leading designs, innovative engineering, and fuel efficiency solutions. Through its 260-plus North American dealer locations, Peterbilt provides comprehensive programs to support its

full line-up of on-highway, vocational, and medium duty products, including alternative fuel vehicles with aftermarket support programs.

Peterbilt's Denton plant opened in 1980 with 82 employees producing 15 trucks a month, and now employs about 2,200 workers producing over 30,300 trucks annually. The Denton facility is Peterbilt's only U.S. manufacturing site, since a plant near Nashville, Tennessee was closed in late 2009. The firm also operates manufacturing plants in Quebec, Canada and Mexicali, Mexico. The Denton plant manufactures a full line of Class 6-8 trucks, including a broad range of on-highway, vocational, and hybrid electric models.



*Peterbilt Model 567*

In December 2013, the Denton plant went into full production of its vocational Model 567, the latest addition to Peterbilt's vehicle product line. The rugged truck or tractor can be configured for dump, mixer, heavy haul, and refuse operations.



The model includes a heavy duty PACCAR MX engine, which is the culmination of a decade-long R&D effort, spurred by federal regulations to develop lower-emission engines. Also in December 2013, PACCAR received certification from the U.S. Environmental Protection Agency (EPA) for its MX engines.

Peterbilt is a leader in natural gas-powered commercial truck market. The company has manufactured trucks featuring liquefied natural gas (LNG) and compressed natural gas (CNG) systems since 1996. Peterbilt currently produces eight natural gas truck systems, more than any other truck manufacturer. In March 2014, Peterbilt announced that CNG versions of the on-highway Model 579 and the vocational Model 567 will be in production later this year.



*CNG Version of Peterbilt Model 579*

### Peterbilt Denton Mfg. Fact Sheet

- Launched operations in 1980
- Occupies 450,000 sq. ft. on 100 acres of land
- Produces more than 30,300 new trucks a year
- Employs approximately 2,200 workers
- Operates 2 production shifts
- \$75 million invested into the plant over the last 5 years
- Products include Aerodynamic, Medium Duty, Vocational, Hybrid, and Traditional Model Lines



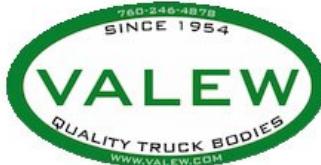
## New to Texas

### Valew Quality Truck Bodies

In February 2014, **Valew Quality Truck Bodies** completed the purchase of a

141,066 square foot property in Graham, Texas. The California-based custom truck manufacturer purchased two Class A buildings on the site

for its first-ever manufacturing facility outside of California. To date, the company has announced plans to hire 50 workers in North Texas.



*Valew Water Truck*



*Valew Refuelling System Truck*

Valew has been building quality trucks since 1954. Its products include water trucks and bodies, dump trucks and bodies, flatbed and stakebed trucks, hydraulic tail equipment haulers, roll-back equipment haulers, service and mechanics truck bodies, fuel and lube trucks, diesel refueler trucks, vacuum trucks, and more.

# Trailers



Load Trail's 750 Gallon Tank Trailer

The Texas trailer and related equipment manufacturing sector includes the production of trailers for agricultural, oilfield, recreational, and other uses, as well as vehicle frames and chassis. The sector's 7,400 workers account for about 21% of Texas' total automotive manufacturing employment. In 2012, Texas ranked No. 2 nationally for employment in this sector, according to the latest federal data. Additionally, many of the 168 trailer manufacturers in Texas are small businesses, with an average of 44 employees each.

## Leading Texas Companies



**Load Trail, Inc.** has grown to become the largest Texas trailer company, operating in Sumner, Texas, northeast of Dallas. The company's facilities span a total of over 420,000 sq. ft. Load Trail was founded in 1996 and began production with enclosed trailers, transport trailers, and sport trailers. Today the firm also manufactures trailer models including goosenecks, car haulers, single axles, dumps, and enclosed cargo trailers.



**Loadcraft Industries** is the second largest Texas company in this sector. It specializes in mobile drilling rig and trailer manufacturing supporting the U.S. and international oil industry. The company's Texas manufacturing facilities include a state-of-the-art tool shop, three weld production lines, on-site testing, and indoor assembly areas.

### Top Trailer Manufacturing Companies in Texas

By Number of Employees

Company	City	Texas Employees	Product
Load Trail, Inc.	Sumner	400	Industrial & recreational trailers
Loadcraft Industries	Brady, Brownwood	350+	Heavy haul and energy industry trailers
Ledwell & Son Enterprises	Texarkana	350	Trailers, water trucks, etc.
PJ Trailer Manufacturing	Sumner	325	Utility trailers
Heil Trailer / Kalyn Siebert	Gatesville, Rhome	320	Specialty transport trailers
Big Tex Trailer Mfg.	Mount Pleasant, Odessa	250	Utility trailers, etc.
Performance Trailers by Parker	Mount Pleasant	200	Utility trailers, etc.
Outlaw Conversions	Stephenville	150	Horse trailers and customizations
Travis Body & Trailer	Houston	135	Specialty dump & transfer trailers
Carry-On Trailer Corporation	Mexia	130	Utility trailers, etc.

*Representative samples only. Sources: D&B, LexisNexis, MNI's Texas Manufacturers Register, company data*

# Motor Vehicle Parts



Toshiba SCiB Rechargeable Battery

The Texas automotive parts manufacturing sector produces a range of vehicle components, from car seats, to air conditioning units, to engines, to microcontrollers. The sector's 16,288 workers account for 45% of Texas' total automotive manufacturing employment. Many of the state's 269 automotive parts companies are small businesses, with an average of 60 employees each. Four of the sector's top manufacturers are profiled on the following pages.

## Automotive Engines and Components

### Toshiba

Toshiba International Corp. (TIC), a wholly owned subsidiary of Japan-based Toshiba Corporation, has its industrial division headquarters in Houston, Texas. Toshiba is a world leader in the design and manufacturing of motors, motor controls, and power electronics. The company provides application solutions to a wide range of industries including lighting systems, power systems, and transmission and distribution systems.

**TOSHIBA**

In 2010, TIC announced the expansion of its 620,000 sq. ft. manufacturing plant in Houston, Texas, to add production of electric traction motors for hybrid electric vehicles, plug-in hybrid electric vehicles, and electric vehicles. In 2012, TIC hired 110 workers to operate the newly added hybrid-motor production unit, which opened in fall 2012 with prototype engine

### Top Motor Vehicle Parts Manufacturing Companies in Texas

By Number of Employees

Company	City	Texas Employees	Product
Toshiba International Corp.	Houston	2,000	Electric motors
Caterpillar	Seguin, Schertz	1,200+	Industrial machinery engines
Continental Automotive Systems	Seguin	1,000	Sensors and actuators
Stoneridge Electronics	El Paso	750	Electronic components
TRW Body Control Systems	Pharr	750	Auto parts and accessories
Sanden International USA	Wylie	700	Automotive air conditioning
Lear Corporation	Arlington	580	Seating & automotive interior systems
Johnson Controls	San Antonio	520	Automotive interiors and batteries
Four Systems (SMP)	Grapevine	450	Climate control products
Trico Products	Brownsville	420	Windshield wipers

*Representative samples only. Sources: D&B, LexisNexis, MNI's Texas Manufacturers Register, company data*

## AUTOMOTIVE PARTS

# Top Motor Vehicle Parts Manufacturers in Texas

Selected firms with manufacturing or management operations in the state



Representative samples only. Sources: D&B, LexisNexis, MNI's Texas Manufacturers Register, company data

production. In March 2014, TIC announced its new Motors & Drives Division, a reorganization to better service the automotive industry. The company currently employs approximately 2,000.

Texas is Toshiba's first overseas manufacturing base for automotive propulsion motors, which were previously produced in Japan. The move followed the awarding of a major contract to supply drive motors for hybrid and plug-in hybrid vehicles for Ford Motor Company. Toshiba supplies the motors for integration into the transmissions that Ford produces in Michigan.



Toshiba hybrid electric vehicle motor

Toshiba made the decision to use onshore production of its hybrid motors due to the long shipping time from Japan to Ford's facility in Michigan, inventory storage space, and currency exchange risks. Shipping time has decreased from six weeks from Japan to four days from Texas.



Toshiba plant in northwest Houston

### Caterpillar

Caterpillar, Inc., a Fortune 500 company, is the world's leading manufacturer of on-highway diesel and natural gas engines, construction and mining equipment, industrial gas turbines, and diesel-electric locomotives. In 2008, Caterpillar received an \$8.5 million Texas Enterprise Fund (TEF) award from the State of Texas

for a new global engine assembly, test, and paint facility in Seguin, Texas. The 1,000,000 sq. ft., \$180-million plant began production in 2010.

Caterpillar's Seguin plant currently employs about 1,200 and operates three production lines. In order to support expanding plant operations and a number of new Caterpillar suppliers that have relocated to the area, the company completed two additional buildings adjacent to their Seguin plant with a combined size of 507,300 sq. ft. in 2012. In April 2014, Caterpillar announced it was closing its Fountain Inn, South Carolina plant and will move its C7 engine assembly line to Seguin, Texas.



CAT C7  
Truck and  
Bus Engine

Caterpillar also operates a plant in Schertz, Texas, that began manufacturing engine blocks and components for the Seguin plant in 2011. The Schertz plant employs about 70 workers.

## Automotive Electronics

### Continental Automotive Systems

In February 2012, the state of Texas awarded a \$1.2 million TEF grant to Continental Automotive Systems, one of the world's largest automotive suppliers, to relocate sensor and actuator production from Europe and Asia to its Seguin, Texas plant. The \$113 million expansion is expected to create 300 new jobs. Based in Germany, Continental also operates facilities in Houston and Uvalde, Texas.



The Seguin plant's new production lines, which are being phased in over five years, will manufacture two types of sensors to be used to monitor and reduce various emissions, improve fuel economy and improve performance of many types of vehicles. Continental's Seguin facility also manufactures powertrain control modules utilized by numerous



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Enterprise Fund (TEF) award from the State of Texas

## AUTOMOTIVE PARTS

domestic and international automotive manufacturers including Ford, GM, Chrysler, Volvo, Acura, Mazda, and machinery producer Caterpillar. At the time of Continental's Texas expansion announcement, the company reported that one of every five U.S. cars had a control module produced in the Seguin, Texas plant.

In March 2014, Continental launched production of short range radar (SRR) sensors for advanced driver assistance programs at its Seguin, Texas plant. A single line will handle production initially, but additional lines are underway to satisfy the demand of OEMs manufacturing in the U.S. The company plans to produce 3 million sensors annually by 2016, spurred by the rapid growth of sensor technologies like camera, lidar, and radar.



Continental's SRR 20X

## Stoneridge Electronics

Stoneridge Electronics, Inc., headquartered in El Paso, Texas, designs and manufactures electronic products

for the automotive industry. The El Paso operations, formerly a General Instruments location, became part of Ohio-based Stoneridge Inc. in 1992, when

Stoneridge acquired the Transportation Electronics Division of General Instruments, a manufacturer of electronic instrumentation components. Located in El Paso, Texas, and Juarez, Mexico, this acquisition was the starting point for the electronics business of auto component supplier Stoneridge. The firm currently serves as a major automotive manufacturing industry employer in El Paso, with an estimated 750 employees.

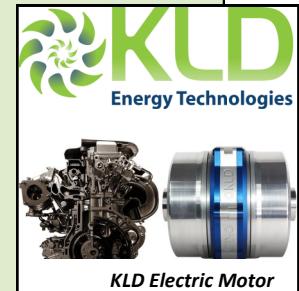
As vehicles become more sophisticated, their electronic content continues to grow. This has helped Stoneridge Electronics become one of the world's leading tier one suppliers, developing, manufacturing, and



## KLD Energy Technologies (KLD)

In 2010, Austin, Texas-based KLD was awarded \$2.8 million from the Texas Emerging Technology Fund to commercialize its transmission-less motor-drive systems for electric vehicles.

KLD's electric motor system has twice the efficiency of existing systems in the market. Through its partnership with Samsung SDI, KLD's battery solution is one of the safest in the industry. KLD's propulsion and generation system is applicable in a broad range of markets, including electric vehicles, elevators, air conditioners, pumps, generators, and other applications. KLD has commenced commercial production and is currently selling its electric motor systems in the U.S. and overseas.



selling a range of products and solutions for trucks, buses, off-road, and tier two suppliers in the global automotive marketplace. Stoneridge Electronics manufactures instrumentation clusters with displays, Digital Tachographs, telematics systems, and engine control units (ECUs). The company's major customers include Scania, MAN, Daimler, DAF, and Volvo.



Stoneridge SE5000 Exakt Duo  
Digital Tachograph

## New to Texas

### Dana Holding

In December 2013, Ohio-based **Dana Holding Corporation**, a leading global auto parts supplier, announced plans to open its 16th global technology center in Cedar Park, Texas. The company will invest \$12 million and create over 80 high-paying jobs in 40,000+ sq. ft. of space. The center is expected to create an economic impact of \$277 million over the next ten years. The city of Cedar Park is supporting the project with over \$1.25 million in financial incentives. Dana's Texas operations are scheduled to begin this year.

Dana's Cedar Park technology center will support the company's VariGlide CVP (continuously variable planetary) technology alliance development initiatives, which were developed through a strategic licensing relationship with Cedar Park, Texas-based **Fallbrook Technologies, Inc.** Dana and Fallbrook, a private energy management technology company, have been working together since 2012.

Dana Holding Corp. is a Fortune 500 company and provider of high technology driveline, sealing and thermal-management products for most major vehicle manufacturers in the on-highway and off-highway markets. The company operates in 26 countries, employs 23,000, and its customers include nearly every major vehicle manufacturer in the global light, medium, and heavy vehicle and off-highway markets.



VariGlide CVP



### Corvac Composites

In November 2013, Michigan-based **Corvac Composites**, a major Toyota supplier and one of the world's largest manufacturers of automotive thermofoam, announced it was locating a new manufacturing facility in San Marcos, Texas. Corvac leased 100,000 sq. ft., created over 30 new jobs, and is estimated to have invested \$3.6 million in equipment. The company received a local incentives package totaling \$189,000, rebating 80% of the taxes on personal property, equipment, and inventory for 10 years. Corvac began operations in San Marcos earlier this year.



Corvac Composites is a privately held company based in Auburn Hills, Michigan, outside of Detroit. Corvac's products include wheel arch liners, under engine covers, and underbody aero covers for automotive applications. Besides Toyota, the company's other major customers include Honda, Chrysler, and Fiat.



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