U.S. Automotive Parts Industry Annual Assessment

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The big stories of 2007 were the continued economic struggle of parts suppliers hit with higher energy, plastic, and steel costs, heavy debt and overcapacity caused by production cuts at Ford, GM, and Chrysler. Although the financial strains of many automotive parts suppliers did ease somewhat in 2007, they continue to struggle. Industry analysts report that since 2001, companies that collectively accounted for more than $72 billion in sales have filed for Chapter 11 protection. Delphi Corporation and Dana Corporation, two of the largest U.S. automotive parts suppliers that filed for Chapter 11 protection, are expected to exit bankruptcy in early 2008.

Industry analysts expect that the Detroit 3 (General Motors, Ford Motor Company, and Chrysler) will continue to lose U.S. market share to U.S.-affiliates of foreign-based manufacturers and imports. Many U.S. parts suppliers are trying to become suppliers to the foreign-affiliated (transplant) automakers to offset the loss of sales to the Detroit 3. However, they are finding it difficult to enter transplant automakers' supply chains, in part because transplants have established relationships with home-market (foreign) suppliers, have had these foreign suppliers co-locate nearby their U.S. operations, or have already established long term relationships with other U.S. suppliers.

International

The United States exported a record $62 billion worth of automotive parts in 2007, up from the $58.9 billion in 2006. Canada, Mexico, European Union 15[1] (EU-15), and Japanese markets accounted for 88 percent of total U.S. automotive parts exports in 2007. The United States imported a record high amount of automotive parts in 2007, reaching $98.8 billion, up from $95.2 billion in 2006. The $8.5 billion worth of automotive parts imports from China in 2007 was an increase of 23 percent from 2006. Combined, Mexico, Canada, Japan, Germany, and China accounted for $79.4 billion, or 80 percent of total U.S. imports of automotive parts. The U.S. trade deficit in automotive parts increased to $36.8 billion in 2007, a 1.4 percent increase from 2006 levels. The $37.1 billion deficit recorded in 2005 was the largest automotive parts trade imbalance in history.

Outlook

Most analysts predict that suppliers with significant raw material, health care and pension costs will continue to struggle to stay competitive. Because U.S.-based suppliers largely remain heavily tied to the traditional U.S. automakers, suppliers will likely mirror the Detroit 3's fortunes. Further restructuring and downsizing of the North American auto parts industry will likely occur. Concerns that the U.S. economy might be entering a recession, experiencing stagflation, or going through a downturn will have a negative impact on the automotive industry. The outlook for U.S. auto suppliers in 2008 is for continued contraction.

[1] The selected European Union countries are Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, the United Kingdom, Austria, Finland, and Sweden.

Introduction

Automotive parts consumption is directly linked to the demand for new vehicles, since roughly 70 percent of U.S. automotive parts production is for the Original Equipment Manufacturer (OEM) products. The remaining 30 percent is for aftermarket sales – the so-called "repair market". If vehicle production goes down, automotive parts production and sales follow. The year 2007 was another difficult year for the Detroit 3 (GM, Ford and Chrysler), as they continued to lose U.S. market share. On the other hand, foreign transplant automakers have continued to increase market share and those U.S. suppliers that supply these automakers are have experienced growth.

Industry experts expect that domestic vehicle manufacturers will continue to lose market share to U.S. affiliates of foreign-based manufacturers and imports. The Detroit 3 have struggled the past few years to make profits on cars and trucks. They have cut costs and have been forced to offer incentives to maintain sales. These automakers continue to demand price cuts on automotive parts, while at the same time reducing their volume requirements. Many U.S. parts suppliers are trying to become suppliers to the foreign-affiliated (transplant) automakers to offset those losses. However, some are finding it difficult to enter transplant automakers' supply chains, in part because transplants have established relationships with home-market (foreign) suppliers, whether through imports or through foreign suppliers' U.S.-affiliates, or have already established long term relationships with other U.S. suppliers. However, as transplant automakers increase their presence in the United States, foreign-affiliated suppliers also increase their U.S. investment, creating equipment sales and jobs in the U.S. economy.

The year 2008 will be another difficult year for the automotive industry. The impact of the home mortgage crisis that began in 2007 has consumers concerned more about their houses, rather than their vehicles, and the credit market is drying up, making it difficult for consumers to get credit to purchase new vehicles and for automotive suppliers to get credit to continue operations. Vehicle production is expected to decrease, causing additional strain on suppliers.

Automotive Parts Sector Definitions

Automotive parts are defined as either Original Equipment (OE), or aftermarket parts. Original equipment parts that are used in the assembly of a new motor vehicle (automobile, light truck, or truck) or are purchased by the manufacturer for its service network are referred to as Original Equipment Service (OES) parts. Suppliers of OE parts are broken into three levels. The first level is "Tier 1" suppliers who sell finished components directly to the vehicle manufacturer. The next level is "Tier 2" suppliers who sell parts and materials for the finished components to the Tier 1 suppliers. The third level is "Tier 3" suppliers who supply raw materials to any of the above suppliers or directly to vehicle assemblers. There is often overlap between the tiers. Original equipment production accounts for an estimated two-thirds to three-fourths of the total automotive parts production.

Aftermarket parts are divided into two categories: replacement parts and accessories. Replacement parts are automotive parts built or remanufactured to replace OE parts as they become worn or damaged. Accessories are parts made for comfort, convenience, performance, safety, or customization, and are designed for add-on after the original sale of the motor vehicle.

Overview of Industry Market Conditions

The U.S. auto industry is a key component of the nation's manufacturing base. In a typical year, it accounts for about 5 percent of GDP and 16 percent of all durable goods shipments. The automotive industry, including the automotive parts sector, accounted for about 996.8 thousand domestic employees in 2007, a decline of 7 percent from 2006[2] and accounted for 7.2 percent of all manufacturing employees. The Center for Automotive Research found that automotive suppliers employed 783,100 U.S. workers and contributed to 4.5 million jobs nationwide in 2004.[3]

Many of the "transplant" manufacturers employ a business model that combines collaboration with its parts suppliers in a lean, flexible, just-in-time (JIT) assembly process. JIT is predicated upon short supply lines that deliver small batches of components to the assembly line steadily and without interruption (often hourly, and sometimes synchronized to match a particular vehicle). Because there is no built up inventory, JIT allows the firms to correct quality problems as they are discovered, and to make changes in product specifications or volume requirements when needed. Buyers and sellers collaborate over time to drive costs down and share in the savings generated. This business model appears to successfully lower the OEMs' input and assembly costs, improve product quality, and stimulate the development of new content. [For more, see <http://www.ita.doc.gov/td/auto/domestic/SupplyChain.pdf>.]

The Detroit 3 are adopting JIT concepts and the collaborative, partnering approach. Until they reach that point, however, they continue to seek price concessions while asking their suppliers to take on more research, design and manufacturing responsibilities and to absorb the higher costs for their inputs. This situation is placing the U.S. parts industry under great pressure.

Pressure is further exacerbated by global competition in the parts industry. As Japanese, German, and Korean-based vehicle manufacturers gain increasingly larger shares of the U.S. market, they maintain relationships with their traditional supplier base. Many of those home market suppliers have been creating or expanding "transplant" capacity in the United States to meet their traditional OEM's production needs. At the same time those

[2] Bureau of Labor Statistics data using NAICS 3361, 3362, and 3363. http://data.bls.gov/PDQ/outside.jsp?survey=ce

[3] *Contribution of the Motor Vehicle Supplier Sector to the Economies of the United States and its 50 States*, by Economics and Business Group, Center for Automotive Research, January 2007. http://www.cargroup.org/documents/MEMA-Final2-08-07_000.pdf

transplant suppliers are aggressively seeking business from the Detroit 3. In addition, suppliers in many lower cost markets are improving their quality and becoming capable of supplying even greater shares of U.S. demand from abroad. The Detroit 3 have also been advocating that U.S.-based suppliers move production to lower cost countries or risk losing future contracts.

The domestic parts industry is in the throes of responding to numerous new challenges. Some suppliers are willingly taking on the new responsibilities offered to them by the OEMs. Some are transforming themselves into "Tier One-Half systems integrators," that engineer and build complete modules (for example, an entire interior, 4-corner suspension sets, or an entire rolling chassis) and assume both product design and development responsibilities and down stream supply chain management functions previously undertaken by the OEMs. Other suppliers are scrambling to add to their capabilities and product lines; building additional plants to satisfy JIT requirements and minimize inventory exposure, adopting global best manufacturing practices, investing in their own development of new technologies, or buying or merging with firms that can contribute new skills, complementary products, and new technologies.

Some firms, however, are choosing not to pursue this new role, consciously deciding to remain in the less demanding tiers. Many of these firms could eventually find themselves in an exceedingly competitive environment of highly cost sensitive, commodity products – particularly if they are unable to differentiate their offerings.

The impact upon suppliers when an automaker sharply curtails operations can be severe. It takes many months and significant resources to win business from vehicle assemblers or from the major "Tier 1" suppliers. Most U.S. suppliers are ill-situated to withstand major disruptions. Unfortunately, dramatic growth in China and other Asian economies has led to high and rising costs for critical raw materials. For example, steel prices have remained high due to strained capacity and dramatic industrial growth in the developing world. The same dramatic growth has also increased petroleum prices. The rise in petroleum prices led to increased energy costs and higher raw material costs for those companies producing petroleum based products (e.g., plastics). These higher raw material costs have pushed several companies into bankruptcy. Plastech Engineered Products, Inc. was a high profile example of a company pushed into bankruptcy in February 2008. The fallout forced Chrysler to shut down five plants for a few days until temporary financial arrangements could be put in place to keep the firm in operation.

Economic Indicators

Total U.S. production of light vehicles was 10.5 million units in 2007, a decline of 3 percent from 2006. The record high production of light vehicles was in 1999 with 12.6 million units. This trend is expected to continue as the Detroit 3 downsize and attempt to manage product mix and keep inventories in balance. However, as production decreases in the United States, production in developing markets is expected to grow in 2008.

Light vehicle production is growing 3.4 percent in Europe, 9.1 percent in South America and 7.3 percent in Asia, while it is dropping 6.0 percent in North America.[4]

Historically, the automotive sector closely tracks general economic indicators, in part because the automotive sector is a major component of these indicators (Charts 1 and 2). There are some worrisome conditions on the horizon, including signs of recession and stagflation, credit drying up as a result of the home mortgage crisis, high oil prices, and a weakened dollar. With the housing market depressed and foreclosures high, consumers are not thinking about purchasing cars when they are danger of losing their homes. Consumers might find it more difficult to get credit to purchase vehicles, resulting in reduced sales. In a credit crunch, automakers and suppliers will be hard pressed to find capital to continue production.

Several industry forecasts expect that 2008 U.S. vehicle sales will fall below 16 million units. Sales of vehicles exceeded 16 million units a year for the last several years. Forecasts expect sales to drop below the 16 million unit mark to an estimated 15.7 million units in 2008 that could result in Ford losing about $3.7 billion and GM about $8.1 billion.

In 2007, the dollar began declining. The weakened dollar should result in more U.S. exports of automotive parts and could encourage foreign suppliers to produce in the United States for domestic and international production. However, the weakened U.S. dollar, which dropped to parity with the Canadian dollar, especially hurts Canadian suppliers and will likely disrupt the network of Canadian suppliers to U.S. plants. General Motors, Ford, and Chrysler buy nearly 90 percent of Canada's parts, with GM alone purchasing $10 billion of Canadian auto parts a year. But with production cuts and the weakened U.S. dollar, the costs of Canadian auto parts exports to U.S. plants are increasing, potentially resulting in increased sales for U.S.-based parts suppliers and additional Canadian supplier bankruptcies.

Because the automotive industry is impacted by other economic sectors, economic conditions in other sectors will affect the automotive industry. Trends in the automotive parts industry follow the motor vehicle industry. However, there is a perception that even in periods of downturn in the motor vehicle sector, lost OE automotive parts production and sales will be offset somewhat by aftermarket sales as demand for replacement parts for vehicles increases. This perception is not always correct, as consumers will also delay all but essential repairs during a recession. Additionally, the durability of parts has increased over time, resulting in less need to replace many normal wear parts. Therefore, declines in OE parts production and sales may no longer be substantially offset by increases in the demand for aftermarket parts.

According to the most recent Annual Survey of Manufacturers (with data through 2006), auto parts industry shipments of $214 billion accounted for 4.3 percent of total U.S. manufacturing shipments (Tables 1 and 2). This is one of the highest shares of any single U.S. industrial sector. Industry employment in 2006 accounted for 4.8 percent of total

[4] "Three Years of N. American Losses for ZF," in Ward's Automotive Reports, 9/17/07.

manufacturing employment. The U.S. automotive parts industry was also one of the largest U.S. exporters, accounting for 6.9 percent of total U.S. goods exports in 2007 (Table 3).

The Original Equipment Suppliers Association (OESA) reported that the worldwide market for Original Equipment (OE) automotive parts decreased 7 percent from $782 billion in 2005 to $727 billion in 2006 (Table 4). The Asia Pacific region, Europe, and North America combined to account for roughly 95 percent of the global market for OE parts.

The global average value of parts per vehicle declined from $12,304 in 2005 to $10,991 in 2006, according to the Original Equipment Suppliers Association (OESA) (Table 4)[5]. OESA reported that this reflects a number of factors including greater global competition among parts suppliers, increased economies of scale, and cost cuts demanded by vehicle manufacturers.

Production

U.S. parts production capacity greatly exceeds current utilization. In part this is because automakers encourage suppliers to be close to auto producing plants to improve "just-in-time" delivery of parts, quality control, and flexibility. Automakers are even experimenting with putting suppliers "inside" production plants.

The Detroit 3 have been examining supplier park systems. The appeal of supplier parks is that it puts parts suppliers in or next to assembly plants, significantly shortening the response time of suppliers, shortening lead time, saving money on shipping parts, and lessening the chance of disruptions. In August 2004, Ford established the first North American automotive supplier park in the Chicago area with 12 suppliers within half a mile of the assembly plant.

For suppliers that produce complex modules and are required to make 'just-in-time' delivery, there are potential benefits to being located in a supplier park. For other suppliers, however, it makes little sense to spend money on building a plant for just one customer to turn out parts that are easy to ship. Suppliers need to consider the costs and benefits of being part of a supplier park to service just one customer. There may be other disadvantages. In tight labor markets, suppliers would be competing for employees with the automaker, which pay higher wages. Or, if the plant fails to reach planned production levels, the venture results in over capicity for suppliers at a time when many are struggling to keep existing capacity running.

[5] "2007-2008 OESA Industry Review," J. D. Power and Associates and OESA, November 2007.

Domestic Market

DesRoisers, an automotive consulting firm, reported that the U.S. market for OE and aftermarket automotive parts dropped 3.3 percent in 2007 to $228.6 billion from $236.4 billion in 2006 (Table 5, Charts 3 and 4).[6] The amount of OE and aftermarket parts supplied from U.S. based suppliers dropped 8 percent to $129.8 billion in 2007 from $141.2 billion in 2006. U.S. based suppliers accounted for 56.8 percent of the U.S. parts market. Market share of U.S. based suppliers has been steadily declining annually from 1990 when U.S. based suppliers accounted for 77.3 percent of the market. Automotive parts imports in the U.S. market increased 3.8 percent overall. However, imports from Canada (-1.5%) and Japan (-7.5%) declined, while imports from China (23.1%), EU (7.1%), and Mexico (7.2%) increased.

Original Equipment (OE) Sector

The size of the U.S. OE parts market was estimated by DesRoisers to be $184.0 billion in 2006[7] (Table 6 and Charts 5, 6, 7). This is a decrease of 4.7 percent from the $193.1 billion in 2005. Despite the OE parts market decreasing in the United States in 2006, it increased to $42 billion in Canada and to $38.4 billion in Mexico, resulting in a net increase of 1.2 percent to $264.4 billion in the North American OE parts market.

Globally, the top 100 OEM suppliers recorded $533 billion in sales in 2006, an increase of 5 percent from $501.8 billion in sales in 2005 (Table 7, Charts 8 and 9). The top 10 global OEM suppliers saw a 4 percent increase in sales to $200.5 billion in 2006 up from $192.7 billion in 2005. Robert Bosch Gmbh had worldwide OE sales of $29.7 billion, while Delphi had $26.4 billion, down 1.8 percent from 2005. Bosch passed Delphi in 2004 to become the world's largest supplier, measured by global sales. North American suppliers lost global market share, accounting for 35.6 percent of cumulative global revenue in 2006, down from 37.8 percent in 2005. Magna International Inc., a Canadian supplier, rose to the fourth largest global OEM parts supplier in 2006. Interestingly, Magna achieved this status with almost no sales in Asia.

The profitable growth among the majority of suppliers whose revenue is principally generated in mature markets has stalled, according to an analysis by PriceWaterhouseCoopers.[8] The analysis also observed that suppliers "strategically entering emerging markets to improve both their cost position and diversify away from traditional customers have tended to generate above average operating income growth despite strong home market headwinds."

DesRosiers reported that the reason that there are so many bankruptcies in the automotive parts sector in the United States is because of the amount of competition is growing as foreign suppliers open shop in North America. An estimated 800-1,000 suppliers from

[6] "The U.S. Market for Automotive Parts," Dennis DesRoisiers email report, 2/21/2008.
[7] *Size of the Parts Market in North America*, DesRosiers analysis email, 1/19/07
[8] PWC Automotive Institute Analyst Note, PriceWaterhouseCoopers, 8/1/07.

overseas built plants in North America in the past 20 years.[9] DesRosiers refers to this as mass global "Localization" of the supplier sector. Some foreign suppliers, especially European companies, that expanded businesses in North America, to supply their Detroit 3 customers, are also trying to move away from Detroit 3 business to Asian automakers. But Japanese suppliers are not immune either. Suppliers in North America all face competition, declining market share, higher material costs, and demanding customers, although the foreign suppliers face fewer legacy costs and tend to operate more efficiently than their U.S. counterparts.

DesRosiers also reported that North American parts demand that is supplied by transplant suppliers in North America has increased from about 10 percent to over 30 percent over the last 10 years. According to Automotive News[10], in 2004, foreign-affiliated suppliers produced 33.1 percent of OE parts sold in North America, up from 27.5 percent in 2001 (Table 5, Charts 3 and 4). Foreign-affiliated suppliers are making significant inroads into the U.S. market through acquisitions, sales to transplant automakers, and sales to the Detroit 3. Moreover, transplant production in the United States has grown significantly, from only 2.6 million light vehicles in 1999 to over 3.9 million light vehicles in 2006. During 2007, transplant production surpassed 4 million units and further growth is anticipated in 2008.

Even the Detroit 3 are purchasing more foreign-based supplier components. For example, Siemens, a German supplier, which had no share of audio systems in North America in 2003, had a 25 percent share in 2005. Also, Denso Corp., the third largest supplier in the world, reported that its sales to the Detroit 3 were rising and that it represents about 40 percent of its total sales, while Toyota accounts for about another 40 percent of Denso's business in North America. (Denso is a member of the Toyota group and expects double-digit growth over the next five years in North America.)

The effect of the foreign-based suppliers' increased share of the North American market is also affecting the North American content of vehicles. In fact, some Japanese vehicles, such as the Toyota Sienna had a 90 percent U.S. and Canadian component content, while traditional American vehicles, such as the Chevrolet Suburban, Ford Mustang and Jeep Grand Cherokee have only between 61-72 percent U.S. and Canadian content.

Aftermarket

The size of the U.S. automotive aftermarket in 2007 was forecasted to be $193 billion, up from $185.2 billion the previous year, according to the Automotive Aftermarket Suppliers Association (AASA). The automotive aftermarket sector does not encounter the same price and cost cut pressures from OEMs that the OE supply chain faces, but the sector is still affected by the overall state of the economy. Factors influencing the health of the aftermarket sector industry include: the state of the overall economy; the number of vehicles reaching prime aftermarket age (about 8 years); the cost of fuel; the amount of

[9] *Size of the parts market in North America*, DesRosiers, 1/19/2007.
[10] Chappell, Lindsay. "Transplant Suppliers Surge in N.A.," Automotive News, November 28, 2005, pp. 1 and 35.

unperformed maintenance; and the ability to get or keep used cars in circulation. In 1996 there were a total of 198 million vehicles in operation in the United States. By 2005, that number had grown to almost 238 million. The number of registered vehicles in the United States continued to grow and more vehicles "came of age" needing more repairs. The aftermarket is also experiencing a shift from Do-It-Yourself (DIY) to Do-It-For-Me (DIFM) consumers as vehicles become more complex and baby boomers age. The larger and older fleet reflects improved overall durability, and indicates a growing market for replacement aftermarket parts such as struts, exhaust systems, water pumps and alternators, as well as performance and styling products.

Sustained periods of gas costing more than $3 per gallon could result in uncertainty for the consumer, reduced miles driven, and prolonged periods of deferrals of automotive services. The Automotive Aftermarket Industry Association (AAIA) did find that the annual miles driven by motorists (11,604 miles per year for cars) was down slightly from previous years, although there was an increase in average vehicle age to 10.1 years for all cars and light trucks and 11.3 years for domestic cars.[11]

According to an article in *Aftermarket Business*, replacement/aftermarket parts are no longer judged on anything other than form, fit, and function, since quality parts can and do come from everywhere. No longer is the "made in America" mark an automotive indication of better quality over parts from other countries. Moreover, other countries are producing quality parts at lower prices. This shift to acceptance of foreign parts has been fueled by China's and India's successes in entering the American aftermarket.[12]

Aftermarket suppliers also need to be able to keep up with new technology. A challenge to the aftermarket is getting repair information so that independent dealers and shops can compete with OE dealers and shops. With the development of more complex electronic equipment, it is difficult for the aftermarket to compete with original equipment suppliers.

A bright spot is the specialty equipment segment of the aftermarket (products are not purchased out of necessity, but rather out of choice). This segment has seen growth rates averaging nearly 7.4 percent annually for the past 10 years, while the total automotive aftermarket grew at an average rate of 4.5 percent, according to the Specialty Equipment Market Association (SEMA).[13] The specialty equipment industry had $12.9 billion in sales in 2006. The specialty equipment market includes products used to modify the performance, appearance, and/or handling of vehicles.

Remanufacturing

Remanufactured automotive parts represent an estimated $85-100 billion industry worldwide. Based on estimates by the U.S. Automotive Parts Remanufacturers

[11] Carley, Larry, "Aftermarket Hits $295 Billion per Year," Automotive Aftermarket Products Expo, 10/31/07.
[12] Ross, Sativa, "Staring Down Commoditization," in *Aftermarket Business*, 12/05
[13] SEMA NEWS, June 2007, p. 47.

Association (APRA), the value of remanufactured parts was $35 billion in the United States in 2007. Roughly 1,000 remanufactured automotive parts companies operate in the United States, including approximately 150 production engine remanufacturers, ranging from assembly line operations to very small companies remanufacturing two or three units per week.

The remanufacturing industry produces goods that are entirely or partially comprised of components recovered from end-of-life products. The process transforms these recovered components into "like-new" goods**.** This reuse of inputs yields important economic and environmental benefits. Remanufactured goods generally have the appearance, performance, and life expectancy of new goods. They often meet the same performance requirements as, and enjoy warranties similar or identical to, equivalent new goods. In short, remanufactured products are usually intended to be identical to and indistinguishable from those products manufactured entirely from raw materials, new parts or components.

Remanufacturing reduces the volume of material entering the waste stream by re-directing retired products to the remanufacturing process. Remanufacturing thereby reduces the amount of raw materials consumed**,** recovers some of the energy and reduces harmful emissions when compared to manufacturing a new part. Remanufacturing saves on new raw material inputs and on energy use, because recovered goods retain the energy and inputs from their original manufacture. For instance, remanufacturing of automotive alternators requires only 12 to 14 percent of the energy that it would normally take to manufacture a new alternator. These savings can result in lower product prices.

However, domestic demand for remanufactured automotive parts in the United States has begun to slow due to original equipment parts lasting longer and competition of low cost new parts imported primarily from China.

U.S. parts remanufacturers and the associated equipment and supplier industry are looking outside the United States for increased sales opportunities. However, many countries limit trade in remanufactured products. Such barriers include outright trade bans, higher tariffs and fees, or stringent regulation, certification, and inspection requirements. Many of these barriers exist because countries associate remanufactured goods with used goods and waste. These barriers can be an excuse to protect inefficient domestic firms. The U.S. government has been working with industry to address the barriers to trade in remanufacturing through our free trade agreement negotiations, the WTO Doha Round, and the 3Rs (Reduce, Reuse, Recycle) Initiative.

Employment Trends

In its January 2007 report, *Contribution of the Motor Vehicle Supplier Sector to the Economies of the United States and Its 50 States*, the Center for Automotive Research (CAR), found that automotive suppliers contribute to 4.5 million jobs nationwide and provide more jobs than any other sector in seven states- Michigan, Indiana, Kentucky,

account for more jobs and provide more economic well-being to more Americans than any other manufacturing sector.

The OESA estimates that there were 30,000 firms in the North American automotive supply chain in 1990, but just 10,000 in 2000 and 8,000 in 2004. By 2010, their numbers may dwindle to no more than 5,000, each enjoying significantly higher sales volumes, but likely to require significantly fewer total employees.[14] OESA/RolandBerger forecasts an 11 percent decline in auto parts production worker employment between 2003 and 2010, caused primarily by increased productivity paired with slowing growth in U.S. output. While some industry observers may question the precision of these estimates, no one disagrees that the industry is experiencing significant competition.

The Bureau of Labor Statistics (BLS), U.S. Department of Labor, reported that employment in the automotive parts industry was an estimated 672,400 jobs in 2007 (Table 8 and Chart 10). This is a decline of 6.9 percent from the 722,600 jobs in 2006. The last time the number of jobs increased in the automotive parts industry occurred in 2000, when employment grew 0.3 percent to 920,300. However, employment fell sharply the following year to just 850,200 jobs.

The Annual Survey of Manufacturers, released in 2007, counted 628,430 employees in the automotive parts industry in 2005 (Table 9). This is a decline of 5 percent from the 661,268 employees in 2005.

CAR reported that auto parts employment could shrink to 500,000 by 2011 as roughly 40,000 auto supplier jobs are trimmed each year.[15] U.S. auto parts makers have cut more than four times as many manufacturing jobs as the automakers during the past six years and that trend is expected to continue. Although U.S. suppliers are reducing jobs, import brands and their suppliers are increasing employment in North America. Many Japanese, German, and Korean suppliers have established manufacturing facilities in the United States that employ a large number of production workers. Still, for each employee added to these foreign suppliers and automakers over the past 14 years, the Detroit 3 has let go 6.1 employees.[16]

The shift from U.S. suppliers to transplant suppliers was demonstrated in the decline of jobs in the automotive sector in Michigan and Indiana, while Alabama experienced an increase in automotive sector employment. When Chrysler announced it intended to slash 13,000 jobs in 2007, 5,500 of those jobs were in Michigan. Michigan experienced the loss of tens of thousands of jobs as a result of restructuring at GM, Ford, Delphi, Visteon, and other automotive companies and suppliers.

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[14] An Odyssey of the Auto Industry, presented before the SAE World Congress on March 8, 2004 and McCracken, Jeffery, "Battered Auto-Parts Makers Could Face More Pain," in Wall Street Journal, 8/13/07, p. A3.

[15] McCracken, Jeffrey, "Battered Auto-Parts Makers Could Face More Pain," Wall Street Journal, 8/13/07, A3.

[16] "Import Brands Add As Detroit 3 Subtract," Automotive News, 11/26/07, p. 34.

Meanwhile, Alabama experienced gains in automotive production. Alabama produced 674,851 vehicles and accounted for 4.3 percent of the North American total in 2006, up from 479,465 units and 2.9 percent in 2005. Alabama was home to three transplant automakers and in 2006 more than 24 new supplier plants and expansions were announced, have increased up to 2,250 jobs in the state. Many of the newcomers to Alabama were smaller suppliers seeking a nonunion work force, proximity to new assembly plants, and state and local incentives.

Less than 8 percent of the nation's private work force was unionized at the end of 2007. When public employees are added to the figure, 12.5 percent of all workers belong to unions, about half the amount there were 25 years ago. The UAW had fewer than 500,000 members at the end of 2007, down from 1.5 million in 1979. Part of this decline was due to greater productivity that allowed auto companies to build more cars with fewer people, but it also reflects reluctance on the part of blue-collar workers to join unions, especially in the new Southern auto transplants. Industry experts expect that union membership will decrease another 100,000 to less than 400,000 members in 2008-2009 because of early retirements, layoffs, buyouts and possible bankruptcies. Recent actions by the UAW agreeing to let some parts companies, such as Delphi and Visteon, hire new workers at a lower pay scale than current UAW members, may also have a negative impact on membership.

Suppliers are negotiating and re-negotiating contracts with unions in efforts to cut back on labor costs. UAW leaders realize that the prospects of even maintaining current pay and benefit levels are dim because so many large suppliers are in Chapter 11. Thus, suppliers are able to lower wages and cut back or eliminate health care, pension, and other benefits. For example, Delphi and Visteon negotiated changes with the UAW in 2006 that would lower retirees' health care benefits and increase health care costs for current working UAW members.

Suppliers are negotiating and re-negotiating contracts with unions (primarily the United Auto Workers) in efforts to cut back on health care, pension, and labor costs. UAW leaders realize that prospects of even maintaining current pay and benefit levels are dim because so many large suppliers are in Chapter 11. Thus, suppliers are able to lower wages and cut back or eliminate these costs. For example, Delphi and Visteon negotiated changes with the UAW in 2006 that would lower retirees health care benefits and increase health care costs for current working UAW members. Late in 2007 GM, Ford, and Chrysler negotiated new contracts with the UAW, decreasing benefits for current and future employees and also lowering retiree benefits. Undoubtedly, when a union contract expires with a parts company in the future, each company will want a contract with similar concessions.

Leading Industry Stories of 2007

Financial Situation of Suppliers

The big stories of 2007 continued to revolve around the weakening economic position of parts suppliers hit with higher energy and steel costs, heavy debt, and overcapacity caused by production cuts at Ford and GM. Delphi continued to work to emerge from bankruptcy through 2007 and its emergence from Chapter 11 was delayed into 2008. Dana Corp, which filed Chapter 11 in 2006, emerged from bankruptcy in February 2008. Other large suppliers, like Tower, Dura, Federal-Mogul, and Meridian emerged from bankruptcy in 2007, while other suppliers entered Chapter 11, including Blackhawk Automotive Plastics, Remy International, Citation Corp., and ASC Inc. As noted above, the first major bankruptcy filing of 2008 was Plastech, the largest minority-owned auto supplier.

The credit crunch has forestalled recovery for many suppliers. Before suppliers can exit bankruptcy they have to have sufficient cash to operate. The high costs of exit financing could force bankrupt companies to remain under Chapter 11 protection longer than anticipated, while racking up legal fees and reorganization expenses, which can be as much as $10 million per month. One source for the exit financing is private equity ownership. A.T. Kearney forecasted that private equity ownership of North America's top suppliers would grow to 36 percent by 2010, up from 25 percent in 2007.[17] However, even these private equity firms face increased difficulty obtaining capital in a credit crunch.

FTI Consulting, a New York-based firm involved in the bankruptcy proceedings at Delphi and Tower Automotive Inc., reported that the slowing of the debt market would hasten the pace of automotive supplier liquidations, bankruptcies, and consolidations. "The caution that's currently being experienced in the credit markets increases the likelihood that some suppliers will be unable to restructure due to their inability to raise some additional financing or refinance their existing debt," said Randall Eisenberg, senior managing director with FTI.[18]

Recently, about 80 percent of private-equity deals, usually lasting three years or less, targeted under-performing suppliers. It is not uncommon for private equity-owned suppliers to turn away business. Traditionally, suppliers would take what they could get-some would make money and others would hopefully balance out. Under private equity ownership, suppliers are not going to accept the job if it doesn't appear profitable.

Private equity also appears to be headed away from the restructuring phase and into the growth phase, either with one firm buying a supplier from another that has completed reorganization or the firm acquiring a group of suppliers to form a nucleus to grow the

[17] Amend, James M., "Private Equity to Ride Shotgun for Foreseeable Future," Ward's Automotive Reports, 8/13/07, p. 1.
[18] McCracken, Jefferey. "Battered Auto-Parts Makers could face more pain," in Wall Street Journal, 8/13/07.

business. About 20 percent of deals today are growth oriented. The consolidation of several suppliers provides the new business with scale, and complementary technology. [19] An example of this is private equity investor, Wilbur Ross, a leader in automotive acquisitions. Through his acquisition of Lear Corp.'s interiors business and some of Collins & Aikman assets, Wilbur Ross built an automotive parts group, International Automotive Group that had an estimated $4 billion in North American sales in 2007, ranking in the top 20 largest suppliers of original equipment parts in North America.

Delphi Saga Continues

Delphi Corporation lost $3.1 billion in 2007, compared to $5.5 billion in 2006. About $3 billion of the 2006 loss was related to the buyouts of about 20,000 workers. Delphi's global OE sales were $26.4 billion in 2006, down from $26.9 billion in 2005. Delphi expects the losses to continue until it can address its high U.S. cost structure and complete its restructuring. Delphi is in talks with GM, the UAW union and investors about cuts and plant closures it says it needs to emerge from bankruptcy. A plan for a group of investors, including Appaloosa Management LP, Cerberus Capital Management LP, and their partners, to invest up to $3.4 billion in Delphi for a 70 percent ownership stake, fell apart when Cerberus turned its attention to and bought Chrysler from DaimlerChrysler.

Delphi had 166 plants worldwide in 2002, including 45 in the United States and Canada, and employed 185,200 people worldwide, including 147,900 hourly workers. Seventy-five percent of the hourly workers were union represented, including 25,200 by the UAW in the United States. About half of Delphi's business was with GM, which purchased $14 billion worth of parts from Delphi in 2004. In Europe, however, GM only accounted for 18 percent of Delphi European revenues.

For the past several years, with thousands of idled workers, rising health care costs, and lower vehicle production, Delphi sought financial relief from its former parent company, GM, and from the UAW. Delphi proceeded to cut 8,500 jobs and divest poorly performing product lines and plants. Delphi was hampered by the cost of paying 4,000 to 5,000 idled workers who still received 95 percent of their wages while they're laid off. Under its separation agreement with GM, laid-off Delphi workers were eligible to take vacant jobs at the automaker, but there are few openings at GM, as the automaker planned to close assembly plants and shed thousands of factory jobs over the next few years. With loses of $4.8 billion in 2004 and $2.4 billion in 2005, and no relief from the UAW, or from GM, Delphi filed for bankruptcy protection on October 8, 2005.

Delphi's workers earned roughly $27 per hour in wages. With health care and other benefits, Delphi workers' compensation amounted to about $65 per hour. This was more than ten times, at least, greater than the compensation paid to workers doing similar jobs in Mexico and China. Delphi sought to trim wages to about $10-12 per hour and reduce benefits. The UAW found Delphi's plans to cut 24,000 U.S. factory jobs within three

[19] Amend, James M. "Private Equity to Ride Shotgun for Foreseeable Future," Ward's Automotive Reports, 8/13/07.

years and its wage offer unacceptable and threatened to strike, putting more pressure on Delphi to negotiate with the UAW.

In 2006, more than 20,000 of Delphi's 33,000 unionized workers agreed to take GM-supported buyouts or early retirements. But the fate of the remaining workers is uncertain. Delphi also plans to close 21 of its 29 U.S. plants, pending final negotiations.

In January 2008, Delphi announced that it planned to emerge from bankruptcy in 2008 with approximately $6.1 billion of exit financing facilities. However, Delphi may need help in obtaining this exit financing. Its plan is threatened by the tightening of credit markets and may require assistance from its former owner, General Motors, to accomplish its goal.

Mergers, Acquisitions, and Bankruptcies

The Detroit 3 shed most of their "captive" parts suppliers as part of their continuing struggle to reduce costs. A collection of firms spun off by GM became Delphi in 1999. Ford formed Visteon in the same way and for the same reasons in 2000. This activity spawned an active business in mergers and acquisitions. Between 1995 and 2001, the industry's 23 largest publicly traded suppliers' consolidated industry sales rose from $62 billion to $112 billion. Helped by these consolidations, 16 of the world's top 50 global OEM suppliers in 2006 were U.S. corporations with global sales of $140 billion.

Industry consolidation has continued as many of the firms involved in those earlier transactions stumbled under high debt. Thompson Financial recorded 32 mergers and acquisitions (M&As) in 2005, up from 26 in 2004 (Table 10).[20] Unlike the previous M&A boom, private equity groups have been making many of the current deals.[21] Also, the value of deals has fallen. In 2002, industry M&As were valued at $12 billion. In 2005, the total value of deals had fallen to $790 million.

Ever increasing competition, changing business models, and industry productivity gains are progressively adding to pressure for consolidation. Some industry analysts estimate that up to 90 percent of U.S. parts suppliers were acquired, merged, or left the business during the 1990s. Industry analysts speculate that of nearly 800 major suppliers in 2000, fewer than 100 will be left by 2010 as a result of bankruptcies, mergers and acquisitions, and migration to other industries.

The extreme competition has likely led to price deflation in the OEM supplier market, yet -- as a sign of the continued industry consolidation -- the top 150 North American suppliers have increased their total sales by roughly 17 percent from 2001 to 2006. Eventually every OEM may deal with no more than 300 to 350 Tier 1 firms, a considerable reduction from the 1970's, when an OEM's direct supplier list numbered

[20] Thompson Financial data presented in the "Aftermarket Factbook, 16th Edition," Automotive Aftermarket Industry Association, 2006/2007.
[21] "Analyst Note," PwC Automotive Institute, PriceWaterhouseCoopers, 08/23/2006.

several thousand. The Detroit 3 are pushing this type of consolidation. John Campi, Chrysler's new head of purchasing says the company is looking to reduce the complexity of their supply system and Ford is in the process of reducing its supply base to roughly 800 companies. GM is seeking similar reductions.

It appeared that all three of the U.S.-based OEMs were also trying to improve their relations with their suppliers somewhat along the lines of their Japanese-based competitors. Honda and Toyota are known for working closely with their suppliers to maintain their financial health. Bo Andersson, purchasing chief of GM said that GM spent less money dealing with distressed suppliers in 2007 than in 2006. "We are much more proactive, and we are getting better and dealing with it. We try to assist suppliers before it's too late," he said. [22]

Continued price pressure from both Tier 1s and OEMs will drive consolidation at the Tier 2 and Tier 3 levels. Indeed, smaller suppliers continue to face the largest shakeout. This is primarily because they are much more likely to be relying on single contracts or multiple contracts from only one of the Tier 1s or OEMs. Thus, they are much more exposed to cancellation of product lines or reduced sales. They are also more prone to bankruptcy than the larger Tier 1s because they have less leverage with their bankers. While smaller companies will often be turned down by their bankers when they exceed their credit lines, larger companies can potentially "owe too much to fail."

A 2007 survey of 113 senior level executives in the automotive sector by KPMG LLC revealed that 60 percent expected, at best, little change in profits for the next five years.[23] Most felt volatility and unpredictability would remain high as competitive pressures continue to intensify worldwide. The executives expect suppliers to remain the least profitable segment of the automotive industry, in particular, Tier 2 and 3 suppliers, and 76 percent of the respondents believed that North American restructuring would last four more years. A majority of the automotive executives also responded that they believe even more automotive business would be conducted across country borders during the next five years and that consolidation will continue to occur among suppliers.

The pressures driving industry consolidation will remain for some time. Alix Partners, a restructuring, consulting, and financial advisory firm, reported that 38 percent of North American suppliers face the prospect of bankruptcy by the end of 2008.[24] Tim Leuliette, former Chairman and CEO of Metaldyne, a manufacturer of automotive metal-formed components, said that "we've put a for sale sign on the U.S. auto industry -- 'cheap,' 'wholesale.' The rebuilding and reconfiguring of the auto industry is one of the biggest plays ever. The time to buy hasn't passed."[25]

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[22] "Carmakers Oil Supply Chain: Toyota, Honda Keep Parts Makers Going; Now GM, Ford Act," by Jewel Gopwani, Detroit Free Press, January 28, 2008.
[23] "Momentum KPMG's 2008 Global Auto Executive Survey," http://www.kpmg.com/NR/rdonlyres/A63D2667-8720-44E3-8070-3136FA03F871/0/Momentum_KPMGs_2008_Global_Auto_Executive_Survey.pdf
[24] "Supplier Turmoil: It Ain't Over Till It's Over," Automotive News, 06/19/2006.
[25] "Metaldyne CEO: U.S. auto industry is up for sale," Daniel Howes, Detroit News, 09/13/2006

Other Industry Developments

Counterfeiting

Counterfeiting continues to be a major issue in the automotive parts industry. The U.S. Federal Trade Commission estimates that counterfeit automobile parts cost the American automotive supplier industry an estimated $12 billion annually worldwide, including $3 billion in the United States alone. In a 2007 study issued by the U.S. Chamber of Commerce, Ford estimates that counterfeit auto parts cost them $1 billion annually. The parts that tend to be counterfeited the most are frequently replaced parts, such as brake pads, spark plugs, and various types of filters. Both Motor and Equipment Manufacturers Association (MEMA) and the Organization for Economic Cooperation and Development (OECD) claim the majority of counterfeit parts are made in China. Other major offenders of producing and exporting fake auto parts include Taiwan, Hong Kong, Russia, India, Pakistan, and Uruguay. The Middle Eastern market has experienced major problems with counterfeit auto parts, mainly being shipped through Dubai. Trademark infringement cases have increased from 400,000 in 2000 to 1.3 million in 2003. Counterfeit parts now comprise an estimated 30 percent of the Middle East's $11 billion components sector. Counterfeiters take jobs and money away from legitimate companies, jeopardize the public's safety, destroy brand names, increase warranty claims, and legal fees and require costly investigations.

In March 2006, President Bush approved the "Stop Counterfeiting in Manufactured Goods Act," which was supported by the U.S. auto parts industry. The Act strengthens previous U.S. trademark laws by prohibiting the trafficking of counterfeit trademarks such as labels, patches and medallions, and requiring the destruction of equipment used to make counterfeit goods.

Alternative Fuels, Hybrid, and Diesel Technology

In President Bush's State of the Union Address in January 2007, he called for an overall 20 percent reduction in America's use of gasoline before 2017. An increase in auto fuel efficiency standards was part of this proposal. Under the plan, fuel economy standards would rise to 34 miles per gallon by 2017, up from 27.5 mpg for cars and 24.0 mpg for trucks for 2011 and beyond. Industry analysts suggested that this proposal would further add to the Detroit 3's competitive pressures and increases Toyota's and Honda's market share growth.

Almost a year later, on December 18, President Bush signed a new act into law that basically achieved his objectives. Although automakers have fought fuel economy mandates for decades, the public momentum of cutting greenhouse emissions and increasing fuel efficiency had automakers supporting the legislation to get regulatory certainty for product planning. The phase-in of the tougher standards will start with the 2011 model year and by 2020 the fuel efficiency standards will be 35 mpg for cars and trucks combined. This law brings the United States closer in line with other countries.

Vehicles in China average around 30 mpg and in Japan, vehicles average 45 mpg. Vehicles in Europe average about 37 mpg, but are set to increase to 50 mpg by 2012. The new law encourages automakers to explore alternative fuels and vehicle technologies, including hybrid, diesel, fuel-cell, electric, and bio-fuels in addition to improving gasoline vehicle fuel efficiency by reducing weight or through advanced technologies such as direct fuel injection and turbochargers.

As the United States scrambles for fuel alternatives, niche parts suppliers of hybrid, diesel, and alternative fuel vehicles are gearing up to position themselves to supply the new demand. Much of this new demand could be captured by foreign suppliers who provide fuel efficiency technologies to foreign automakers elsewhere in the world.

Positive consumer and political response to hybrid vehicles has increased the focus on hybrid technology. In 2006, hybrid sales increased 28 percent to 254,545 units compared to 2005. In 2005, 205,749 hybrids were sold in North America, more than double the 88,000 hybrids sold in 2004. This is not a large portion of the total sales of motor vehicles, but it does represent a large increase, since Honda introduced the first hybrid to the U.S. market in 1999. Ford promised to boost production of hybrid vehicles to 250,000 cars and trucks per year by 2010. Roughly 350,000 hybrid vehicles[26] were sold in the United States in 2007 compared to 2006.

To keep up with U.S. demand for hybrid vehicles, the Detroit 3 are having to turn to foreign suppliers for batteries, electric motors and power inverters. The U.S. supply chain is not mature for hybrids, according to Larry Nitz, Executive Director of GM's hybrid program.[27] Currently, Japanese suppliers are the source for most of the world's hybrid parts. Some U.S. suppliers, like Johnson Controls, are trying to enter the market, but uncertainty is keeping U.S. suppliers from committing capital to an emerging market.

Hybrid electrical components fall into three basic categories: electric motors, batteries, and invertors. Other potential segments of a hybrid's component business would be electronically driven accessories, software controls, instrument panels and cooling systems. Suppliers that provide related components for conventional powertrains would have an advantage in adapting their parts to hybrid systems and some are working on it. However, at the same time, they are cautious and skeptical that hybrids will be as big as some studies suggest.

Battery research is a top priority. Batteries are important for electric, hybrid and fuel cell vehicles. The challenge is to create a battery that can recharge quickly, last long and not overheat, while still being small, light and cost-effective. If the cost of lithium-ion batteries doesn't decrease as projected, it could jeopardize the development of some hybrid-electric vehicles. Battery manufacturers, including A123 Systems, Cobasys LLC, and a partnership between Johnson Controls Inc. and Saft Advanced Power Solutions, are leading research to overcome Li-ion battery shortcomings. Current offerings have little

[26] Green Car Congress, "Reported U.S. Hybrid Sales up 38 percent for 2007," www.greencarcongress.com, 1/4/08.
[27] Detroit News Autos Insider, by John D. Stoll, "Supply chain crimps hybrid output" 9/20/05

chance of overheating and can take many charges and recharge cycles but are limited in the amount of energy they can store. They are also expensive.

While GM, Ford and Japanese automakers are turning their research and development attention to hybrid technology for the U.S. market, Daimler, Chrysler and Volkswagen, are pushing Washington to include diesel engines in programs that promote environmentally friendly vehicles. Diesel technology is dominant in Europe, but despite significant reductions in diesel emissions, it remains difficult to engineer diesel powered vehicles to meet stricter U.S. emissions regulations.

The fact that only about 34 percent of filling stations in the United States sell diesel fuel also limits its attractiveness to consumers. Refineries are now providing much lower sulfur diesel fuel which does make meeting emission regulations much easier. Hybrids, on the other hand, use a gasoline engine with the assistance of electric motors, reducing emissions compared to traditional gasoline engines. Analysts predict that there will be about 50 hybrid vehicle models available in the United States by 2010. J.D. Power and Associates reported that U.S. hybrid sales are expected to represent 3.5 percent of the market by 2012.

General Motors announced plans to equip the Saturn Aura and a Cadillac sedan with diesel engines by 2010. Siemens VDO Automotive Corporation, one of the largest suppliers of diesel fuel injection systems projected that U.S. diesel sales will grow to 867,000 units in 2012, up from an estimated 653,000 units in 2007. This is compared to hybrid vehicle sales projected at 510,000 units in 2012.[28]

A new battery electric sports car, the Tesla roadster will begin limited production in early 2008. Headquartered in Monterey, California, Tesla uses Taiwanese-built batteries and electric motors in a British-built (Lotus) sports car body to give a 200+ mile range with a top speed of 130 m.p.h. and a 0-60 m.p.h. time of 4 seconds. The technology is not cheap (priced at $89,000), but Tesla Motors expects to sell between 600-800 in a full year's production.

New Technologies, Engineering, Safety, and In-Vehicle Electronics

According to a study by Roland Berger, a strategy consultant firm, the value added to vehicles by suppliers will grow from 40 percent in 2002 to 55 percent by 2015.[29] Among some of the new technologies being added or becoming standard on vehicles are safety features like blind-spot detection, and side/head airbags. Other innovations being added are navigation systems, MP3 player connections, Bluetooth wireless connections, and mobile video.

[28] Truett, Richard, "Diesel Cars Poised for Upsurge in U.S. Market," Automotive News, 7/16/07, p. 1.
[29] Roland Berger Strategy Consultants and OESA, "The Odyssey of the Auto Industry: Suppliers Changing Manufacturing Footprint," 04/2004.

Some analysts predict that electronic components of vehicles could account for 35 percent of the cost of making a car by 2010, up from 22 percent in 2005, and that the amount of software in cars would double every three years. However, these electronics add to the vehicles' complexities and accounted for about 70 percent of breakdowns in 2005. Communication, navigation, and entertainment systems in vehicles are complex computerized electronic equipment that are becoming more prevalent. Analysts predict that these systems will be a $10 billion a year industry by 2010.[30] Mobile electronics sales grew 10.6 percent in 2006. The market has shifted from a concentration on sound systems to one that is about navigation and entertainment systems. In 1999, navigation and entertainment systems accounted for under 12 percent of total mobile electronics retail sales. In 2006, the market share was 23.5 percent.

A survey by TechnoMetrica, reported by SEMA, found that one in ten owners have navigation or safety/security services installed in their vehicles; about one out of five consumers were planning to install navigation systems within the next 12 months, while 13 percent were planning to install safety/security services. DVD players were moderately important to consumers.[31] A study by Telematics Research Group Inc., found that nearly 70 percent of the 2008 model vehicles will offer a voice-activated Bluetooth interface for hands-free phone operation. The study also found that 80 percent of the 2008 models will offer navigation as standard or optional; auxiliary input ports and flash memory interfaces will be available on most models; and USB ports will be offered on nearly 20 percent of the models.[32]

Advanced adaptive cruise control began entering the market on European luxury cars in 2006. Adaptive cruise control (ACC) maintains a certain distance from the car in front, down to a crawl. Advanced ACC would bring the car to a stop and could resume its cruise control functions from a stop. Such technology raises legal and liability questions involving equipment that functions independently of the driver. The technology is also expensive, costing about $1,500 to $2,500 because of the radar or infrared emitters and sensors to track other cars. Suppliers are working on ways to reduce the price, including using camera-based systems and less expensive radar equipment.

Some suppliers, like TRW Automotive, with products such as seatbelts and air bags to antilock brakes and electronic stability control systems, have benefited from automakers' emphasis on safety and new safety regulations. In 2006, the National Highway Traffic Safety Administration (NHTSA) proposed that electronic stability control, which automatically applies pressure to brakes to correct for skidding and swerves, become standard on all vehicles except the largest trucks by 2012. Currently, only 30 percent of new vehicles have electronic stability control. Suppliers of electronic stability control systems expect to get a sales boost of more than $1 billion if the regulation passes. The North American market for electronic stability control systems is expected to expand from about $555 million in 2006 to $1.8 billion in 2012.

[30] Spoonhower, Jim, "Mobile Electronics," SEMA NEWS, 12/07, pp. 94-98.
[31] Spoonhower, Jim, "Mobile Electronics," SEMA NEWS, 12/07, pp. 94-98.
[32] "Continental, Microsoft Target Telematics," Ward's Automotive News, 9/10/07, p. 3.

The success of airbags, which NHTSA estimates saved 18,193 lives since their inception, has led to an increase in side-curtain airbag business. New federal side-impact regulations will increase installation of side-curtain airbags as automakers and suppliers devise different ways to meet the standard. CSM Worldwide, automotive market analysts, predicts that North American sales of side-curtain airbags will grow to 17 million units in 2010, up from 9.2 million in 2006. The value is projected to reach $4.3 billion by 2010 from $2.8 billion in 2006.

International Developments and Trade

Despite a weakening in the United States, suppliers globally were generally profitable. Suppliers in developed countries faced a more difficult market, but those in developing markets experienced more growth. In its 2006 Global Automotive Supplier Study, Roland Berger Strategy Consultants found that suppliers based in Western Europe, South Korea and other parts of the world maintained steady profitability between 2000 and 2005, while Japanese suppliers posted 3.2 percent gains, and North American suppliers declined 3.6 percent between 2000 and 2005. Those most successful had a narrowly focused product portfolio, broad customer base globally, low reliance on business with the Detroit 3, and aggressive use of component sourcing from low-cost regions of the world.

Some U.S. suppliers are finding that while they are having difficulties at home, their foreign operations are profitable. Large suppliers, such as Johnson Controls Inc., Lear Corp., TRW Automotive Inc., ArvinMeritor Inc., and Dupont Automotive Systems, get at least 35 percent of their total revenue from Europe. Some suppliers are trying to reduce their dependence on the high-cost, low-margin American market and shift manufacturing to lower cost countries.

The U.S. trade deficit in automotive parts rose 1.4 percent in 2007 to $36.8 billion, down from a record level of $37.1 billion in 2005 (Table 11, Charts 11 and 12). Although there was a slight decline in the parts deficit in 2006, it was expected to climb as U.S. automotive parts production lost market share to increasingly competitive foreign production.

According to U.S. Census data, the United States exported a record $62 billion worth of automotive parts in 2007. This is an increase of 5.3 percent from the $58.9 billion worth of automotive parts in 2006 (Table 12, Charts 11 and 13). Automotive parts exports to Canada ($32.7 billion) and Mexico ($13.9 billion) accounted for 75 percent of the total U.S. parts exports in 2007, down from the 76 percent they accounted for in 2006 (Chart 14). U.S. automotive parts exports to Japan and the EU-15 accounted for $7.3 billion, or 12 percent, of the total U.S. automotive parts exports. Combined, the NAFTA, European Union 15, and Japanese markets accounted for 87 percent of total U.S. automotive parts exports in 2007.

The United States also imported a record high amount of automotive parts in 2007, reaching $98.8 billion, an increase of 3.8 percent from $95.2 billion in 2006 (Table 13, Charts 11 and 15). In 2007, Canada, accounted for $20.1 billion worth of U.S. automotive parts imports and Mexico accounted for $28.3 billion. Together, automotive parts from these two countries accounted for 49 percent of the total U.S. automotive parts imports (Chart 16). Rounding out the top five supplier countries of automotive parts to the United States in 2007 were Japan ($14.2 billion), China ($8.5 billion), and Germany ($8.3 billion). Combined, Mexico, Canada, Japan, Germany, and China accounted for $79.4 billion, or 80 percent of total U.S. imports of automotive parts.

Industria Nacional de Autopartes (INA), Mexico's national parts association, expected Mexico to surpass Canada as the largest supplier to the U.S. auto industry, apparently referring to OE parts sales as Mexico has been the largest supplier of OE and aftermarket automotive parts for several years. This expectation is feasible, as Mexico's total (not just OE parts) automotive parts exports to the United States increased 7.2 percent in 2007 from 2006 rates, while Canada's declined 1.5 percent in the same period.

Japanese auto parts shipments to the United States were down 7.5 percent in 2007 from 2006 levels. A large portion of these imports are components for assembly at the Japanese transplant facilities. The Japanese produced roughly 4 million vehicles in the United States in 2007, compared to about 1.5 million vehicles in 1990, and another 2 million vehicles in Canada and Mexico. The Japanese U.S. auto plants are sourcing more of their components in the United States, Canada, and Mexico.

China continues to grow as a source of automotive parts for the United States (Charts 17 and 18). Imports from China increased 23 percent in 2007 to $8.5 billion from $6.9 billion in 2006, passing Germany as the fourth largest source of auto parts after Mexico, Canada, and Japan.

China

China is the second largest automotive market in the world, with vehicle production increasing 22 percent to reach 8.9 million units and sales increasing almost 22 percent to hit 8.8 million units. Auto production and sales in China are both expected to reach 10 million vehicles in 2008. It is estimated that China will overtake the United States as the largest auto market by 2015. More than 70 of the top 100 global auto suppliers now have operations in China, and foreign auto parts suppliers continue to open and/or expand their Chinese operations. The global vehicle manufacturers with operations in China have encouraged suppliers to set up manufacturing facilities in China, since most of China's traditional domestic suppliers are not competitive. The vehicle manufacturers also expect China to become a low-cost source for their worldwide operations. Goldman Sachs estimates that Chinese net exports of auto parts will increase from $5.4 billion in 2005 to $21 billion in 2010. However, rising labor costs, raw material prices, currency exchange rates, and the slow development of qualified Chinese suppliers could hinder the growth of Chinese auto parts exports.

China has become a strong player in manufacturing global automotive electronics. While China lacks auto-electronic design experience and local suppliers lack manufacturing and technical expertise, China already has a strong consumer electronics business as a major producer of CD players, computers and other mass-market items. These skills could be adapted to automotive electronics and foreign companies are assisting these businesses. Another subsector where China excels is cast metal parts, which require environmentally hazardous casting and a large amount of manual labor.

As Chinese auto producers prepare to enter Western markets in the next few years, top global suppliers are assisting them with engineering and technical expertise. Chinese automakers are also buying factory equipment from leading international suppliers. Competitive Chinese suppliers are looking to begin manufacturing and selling in overseas markets. Many are acquiring or investing in small and medium-sized suppliers located in these markets, including the United States, to help them begin manufacturing and/or assist with distribution as well as transfer technology back to China.

The Chinese government's auto policies strongly encourage the development of the local supplier industry, including automotive-related R&D activities. In Spring 2006, the United States, along with the EU and Canada, requested World Trade Organization (WTO) dispute settlement consultations with China regarding regulations on imported auto parts. They argued that China's auto parts tariff classification regulations result in increased tariffs that are higher than China agreed to in its WTO accession agreement, and it discourages auto manufacturers in China from using imported auto parts. China's regulations impose the same tariff rates for a vehicle on imported auto parts if the imported parts exceed a fixed percentage of the final vehicle content or vehicle price, or when specific combinations of imported auto parts are used in the final vehicle. The tariff on automobiles is typically 25 percent, and the tariff on imported parts is typically 10 percent. In February 2008, the three member WTO panel issued an interim ruling that found China's tariffs to be unfair and inconsistent with its WTO commitments. The final report is expected in the spring or early summer of 2008.

When deciding whether or not to set up an operation near a specific customer in China, U.S. suppliers need to determine if economies of scale can be achieved, if energy sources are reliable, and if they will be able to source from reliable, lower-tier suppliers or be able to import subcomponents at a competitive price. In addition, suppliers need to be aware that increased competition for both parts and vehicles in China has led to a decrease in prices and profit margins. If entering into a joint-venture arrangement, any potential partner should be carefully evaluated. Automotive-related counterfeiting in China also remains a concern for the industry, especially when sharing intellectual property with partners or suppliers. Because the transfer of knowledge would allow the Chinese to compete against the proprietors and may invite counterfeiting, many companies are reluctant to send advanced technology to China. When considering sourcing from China, U.S. companies are cautioned to not be lured by price and/or low wage rates alone, but to consider their potential suppliers' quality levels, a supplier's technical and engineering expertise to cope with design changes, as well as all of the various logistical factors, such

as necessary lead time, and delivery schedules and costs. The safety and compliance of Chinese-manufactured goods is also a sourcing concern, as evidenced by the recall during the summer of 2007 of 450,000 defective tires imported from China.

The Chinese automotive aftermarket is expected to continue to grow as the market increases for both new and used autos, the number of outlets offering aftermarket parts and services expands, new emissions control technologies are introduced, and the Chinese economy continues to grow. The U.S. Commercial Service-Shanghai reports that Chinese consumers show strong interest in vehicle accessories such as seatback video displays, neon lights, and leather upholstery.

Conclusion

The U.S. automotive parts industry can expect another difficult year in 2008. Economic strains will continue to derive from Ford, GM, and Chrysler's production cuts, steel and raw materials prices, price cut demands from U.S. automakers, and increased competition from foreign suppliers. The industry can expect more departures and consolidations of suppliers as profit margins are squeezed.

Industry experts expect that domestic vehicle manufacturers will continue to lose market share to U.S.-affiliates of foreign-based manufacturers and imports. Many U.S. parts suppliers are trying to become suppliers to the foreign-affiliated (transplant) automakers to offset those losses. However, some are finding it difficult to enter transplant automakers' supply chains, in part because transplants have previously established relationships with home-market (foreign) suppliers, whether through imports or through home-market suppliers' U.S.-affiliates, or have already established long term relationships with other U.S. suppliers. However, as transplant automakers increase their presence in the United States, foreign-affiliated suppliers also increase their presence to supply the automakers, creating demand for new equipment and jobs in the U.S. economy.

The difficulties of several major suppliers have resulted in equity investors and investor groups like Ross, Icahn, Appaloosa Management, Cerberus Capital Management, and Highland Capital Management, taking an interest in the restructuring of suppliers and becoming major players in the industry.

Automotive parts imports from China will continue to grow and account for a growing share of U.S. automotive parts imports. Most likely, the U.S. automotive parts trade deficit with China will continue to grow over the next few years as exports to China will not keep up with imports from China. Some analysts predict that automotive parts companies will continue to move production to China and other low-wage countries like India and Eastern Europe, in an effort to reduce costs and remain competitive.

FACT SHEET

Production

- U.S. automotive parts industry production declined further in 2007 compared with 2006, in large part because of vehicle production cutbacks at the Detroit 3. Industry analysts predict that 2008 will be another difficult year for U.S. automotive parts suppliers and vehicle makers as the market remains relatively flat (or declines) and competition remains fierce. This is especially true for suppliers that rely heavily on the Detroit 3.

- The Bureau of Labor Statistics (BLS), U.S. Department of Labor, reported that employment in the automotive parts industry was an estimated 672,400 jobs in 2007. This is a decline of 6.9 percent from the 722,600 jobs in 2006. The last time the number of jobs increased in the automotive parts industry occurred in 2000, when employment grew 0.3 percent to 920,300.

- Regardless of production and employment declines, automotive manufacturers and suppliers directly and indirectly account for more jobs and provide more economic well-being to more Americans than any other manufacturing sector.

Sales

- The 150 largest North American OE suppliers had sales of $196 billion in 2006, down 3.5 percent from 2005. The top 10 North American suppliers accounted for 38.1 percent of the total in 2006, down slightly from 40.6 percent of the total in 2005.

- Suppliers are preparing for declines in automotive sales and production by diversifying geographically, increasing research and development, turning to joint ventures, seeking more module (complete systems, not just components) contracts, and leaving marginal segments.

- The U.S. automotive aftermarket (repair and add-on market) was estimated to be $192.7 billion in 2007, up 4.0 percent from $185.2 billion in 2006.

International Trade

- The 2007 U.S. trade deficit in automotive parts increased 1.4 percent, to $36.8 billion, from $36.3 billion in 2006.

- U.S. exports of automotive parts in 2007 were $62 billion, an increase of 5.3 percent over 2006 levels.

- Exports to Canada and Mexico accounted for 75 percent of the total U.S. automotive parts exports in 2007.

- U.S. exports to China grew almost 39 percent in 2007, from $815 million in 2006 to $1.1 billion in 2007.

- Automotive parts imports from China have grown significantly in recent years. In 2000, the United States imported $1.6 billion worth of automotive parts. By 2004, the value more than doubled to $3.9 billion. In 2007, automotive parts imports from China grew to $8.5 billion, passing Germany as the fourth largest supplier of auto parts to the United States.

- Since 2001, the U.S.-China auto parts trade deficit has grown from $1.5 billion to almost $7.4 billion in 2007.

- U.S. imports of automotive parts were $98.8 billion in 2007, an increase of 3.8 percent over 2006 levels.

- The United States imported $48.4 billion worth of automotive parts from Mexico and Canada in 2007. These imports accounted for 49 percent of total U.S. automotive parts imports.

Industry Issues

- In 2007, many U.S. parts suppliers were hit with higher energy, plastic, and steel costs, heavy debt, cash flow problems, and overcapacity caused by production cuts at Ford, GM, and Chrysler.

- Suppliers are trying to deal with high legacy costs, employee wages, and benefits to be competitive globally. Tough negotiations are taking place between suppliers, automakers, and labor unions.

- Industry analysts predict that, of nearly 800 major suppliers in 2000, fewer than 100 will be left by 2010 as a result of bankruptcies, mergers and acquisitions, and migration to other industries.

Appendix 1

Office of Aerospace and Automotive Industries Automotive Parts Product Listings
Revised 12.05.2007

To facilitate the analysis of trade data for automotive parts on a market-based model, the Office of Aerospace and Automotive Industries (OAAI) has created six product groupings from the available, individual 10-digit product codes. The core of the codes are contained in Chapter 87, AVehicles Other Than Railway or Tramway Rolling-Stock, and Parts and Accessories Thereof@ of the internationally-agreed Harmonized Tariff System (HTS). We list these groups and their codes below. Some codes are not valid for current years, but are included to assure that data for products so coded for previous years are retrieved from the database and assigned to the appropriate OAAI group.

The OAAI groups are not "official" product subcategories, and are not listed in the Harmonized Tariff System nomenclature published by the U.S. International Trade Commission (USITC) for coding imports (Internet address: http://www.usitc.gov/taffairs.htm), nor in the parallel "Schedule B" published by the U.S. Census Bureau for coding exports (http://www.census.gov/foreign-trade/schedules/b/2001/sb87.htm). The OAAI attempts to closely approximate the core automotive industry by excluding certain items for example, parts explicitly listed for motorcycles, golf-carts, snowmobiles, agricultural equipment, etc.

Readers should realize that OAAI is not the only, nor the "official," U.S. government source for trade data on the auto industry, nor are we able to produce custom data runs for the public. Persons seeking data for individual or different product codes are welcome to utilize at no charge the data retrieval system operated by the USITC to access the federal government=s official trade data base. Please note, some of the data on the trade database may be restricted from the public. The ITC=s retrieval system, *Trade DataWeb*, can be accessed at <http://dataweb.usitc.gov/scripts/user_set.asp>.

HTS Codes by Product Group

HTS Codes for U.S. Imports of:	
Bodies and Parts	
7007110000	Safety Glass
7007110010	Safety Glass
7007211000	Windshields
7007211010	Windshields
7007215000	Safety Glass
7009100000	Rear-View Mirrors
8301200000	Locks
8301200060	Other Locks
8302103000	Hinges
8302303000	Other Mountings
8302303010	Pneumatic Cylinders

HTS Codes for U.S. Exports of:	
Bodies and Parts	
7007110000	Safety Glass
7007211000	Windshields
7007215000	Safety Glass
7009100000	Rear-View Mirrors
8301200000	Locks
8302103000	Hinges
8302300000	Other Mountings
8707100020	Bodies
8707100040	Bodies
8707905020	Bodies
8707905040	Bodies

8302303060	Other Mountings
8302306000	Other Mountings
8707100020	Bodies
8707100040	Bodies
8707905020	Bodies
8707905040	Bodies
8707905060	Bodies
8707905080	Bodies
8708100010	Stampings of Bumpers
8708100050	Bumpers and Parts
8708103010	Stampings of Bumpers
8708103050	Bumpers
8708106010	Stampings Parts of Bumpers
8708106050	Parts of Bumpers
8708210000	Seat Belts
8708290010	Stampings of Bodies
8708290025	Truck Caps
8708290050	Parts & Access. of Bodies
8708290060	Parts & Access. of Bodies
8708291000	Inflators & Modules Airbags
8708291500	Door Assemblies
8708292000	Body Stampings
8708295010	Stampings
8708295025	Truck Caps
8708295060	Other Parts
8708950500	Inflators & Modules Airbags
8708952000	Airbag Parts
8708995045	Slide in Campers
8708996100	Airbags
9401200000	Seats
9401200010	Child Safety Seats
9401200090	Seats
9401901000	Seat Parts
9401901010	Seat Parts of Leather
9401901020	Seat Parts of Textile
9401901080	Seat Parts
9401901085	Seat Parts
9403406000	Wooden Furniture for M.V.
9403506000	Wooden Furniture for M.V.
9403901000	Furniture?
9403901040	Parts of Furniture for M.V.
9403901050	Parts of Furniture for M.V.
9403901080	Parts of Furniture for M.V.
9403901085	Parts of Furniture for M.V.

8707905060	Bodies
8707905080	Bodies
8708100010	Stampings of Bumpers
8708100050	Bumpers and Parts
8708210000	Seat Belts
8708290010	Stampings of Bodies
8708290025	Truck Caps
8708290050	Parts & Access. of Bodies
8708290060	Parts & Access. of Bodies
8708295025	Truck Caps
8708295070	Other Pts. & Access. Bodies
8708295170	Parts & Access of Bodies
8708990045	Slide-in Campers
8708998030	Slide-in Campers
8708998130	Slide-in Campers
9401200000	Seats
9401901000	Seat Parts
9401901010	Seat Parts of Leather
9401901080	Seat Parts
9403901000	Parts of Furnitures

Chassis and Drivetrain Parts

4009120020	Brake Hoses
4009220020	Brake Hoses
4009320020	Brake Hoses
4009420020	Brake Hoses
4009500020	Brake Hoses
6813100050	Brake Linings & Pads
6813200015	Brake Linings & Pads
6813200025	Asbestos Friction
6813810050	Brk Lngs & Pads, not asbestos
6813890050	Min Sub Friction
6813900050	Friction Materials
7318160010	Lugnuts
7318160015	Lugnuts
7318160030	Lugnuts
7318160045	Other Lugnuts
7320100015	Leaf Springs
7320103000	Leaf Springs
7320106015	Leaf Springs
7320106060	Leaf Springs
7320201000	Helical Springs
8421394000	Catalytic Converters
8482101000	Ball Bearings
8482101040	Ball Bearings
8482101080	Ball Bearings
8482105044	Radial Bearings
8482105048	Radial Bearings
8482200010	Tapered Roller Bearings
8482200020	Tapered Roller Bearings
8482200030	Tapered Roller Bearings
8482200040	Tapered Roller Bearings
8482200050	Tapered Roller Bearings
8482200060	Tapered Roller Bearings
8482200070	Tapered Roller Bearings
8482200080	Tapered Roller Bearings
8482400000	Needle Roller Bearings
8482500000	Other Cylindrical Bearings
8708301090	Brakes and Parts
8708305020	Brake Drums
8708305030	Brake Rotors (Discs)
8708305040	Mounted Brake Linings
8708305090	Brake Parts
8708315000	Mounted Brake Linings
8708395010	Brake Drums & Rotors
8708395020	Brake Drums
8708395030	Brake Rotors
8708395050	Brakes & Servo-Brakes

Chassis and Drivetrain Parts

4009120020	Brake Hoses
4009220020	Brake Hoses
4009320020	Brake Hoses
4009420020	Brake Hoses
4009500020	Brake Hoses
6813100000	Brake Linings & Pads
6813200000	Friction Material
6813810000	Brake Linings
6813890000	Other Brake Materials
6813900000	Other Friction Materials
7320100000	Leaf Springs
7320201000	Helical Springs
8421394000	Catalytic Converters
8482101000	Ball Bearings
8482105044	Radial Bearings
8482105048	Radial Bearings
8482200020	Tapered Roller Bearings
8482200030	Tapered Roller Bearings
8482200040	Tapered Roller Bearings
8482200060	Tapered Roller Bearings
8482200070	Tapered Roller Bearings
8482200080	Tapered Roller Bearings
8482400000	Needle Roller Bearings
8482500000	Other Cylindrical Bearings
8708300010	Mounted Brake Linings
8708300050	Brakes & Servo-Brakes
8708310000	Mounted Brake Linings
8708390000	Other Brakes
8708401000	Gear Boxes
8708401110	Gear Boxes
8708401150	Gear Boxes
8708402000	Gear Boxes
8708403500	Gear Boxes
8708406000	Gear Boxes
8708408000	Gear Box Parts & Access.
8708500050	Drive Axles
8708504110	Drive Axles
8708504150	Non-Driving Axles
8708507200	Drive Axle Parts & Access
8708600050	Non-Driving Axles
8708700050	Road Wheels & Pts.
8708800050	Suspension Shock Absorbers
8708805000	Suspension Shock Absorbers
8708807000	Suspension Systems Parts
8708918000	Radiator Parts & Access.
8708925000	Radiators

8708401000	Gear Boxes
8708401110	Gear Boxes
8708401150	Gear Boxes
8708402000	Gear Boxes
8708405000	Gear Boxes
8708407000	Cast Iron Parts, Gear Box
8708503000	Drive Axles for Tractors
8708505110	Drive Axles for Tractors
8708505000	Drive Axles
8708505110	Drive Axles
8708506100	Drive Axles
8708505150	Non-Driving Axles
8708506500	Non-Driving Axles
8708507900	Parts of Non-Driving Axles
8708508000	Drive Axles
8708508100	Cast Iron Parts, Drive Axles
8708508500	Drive Shaft Parts
8708508900	Drive Axles Parts
8708509110	Spindles for Non-Drive Axles
8708509150	Parts of Non-Driving Axles
8708509300	Cast Iron Parts, Drive Axles
8708509500	Drive Shaft Parts
8708509900	Parts, Drive Axles
8708605000	Non-Driving Axles
8708608010	Spindles
8708608050	Non-Driving Axles
8708704530	Road Wheels
8708704545	Road Wheels
8708704560	Wheel Rims
8708706030	Wheel Covers
8708706045	Wheel Covers & Hubcaps
8708708010	Wheels
8708708015	Wheels
8708708025	Wheels
8708708030	Wheels
8708708035	Wheels
8708708045	Wheel Rims
8708708050	Parts & Access. for Wheels
8708708060	Wheel Covers & Hubcaps
8708708075	Parts & Access. for Wheels
8708801300	Suspension Shock Absorbers
8708801600	Suspension Shock Absorbers
8708803000	Suspension Shock Absorbers
8708804500	Suspension Shock Absorbers
8708805000	Suspension Shock Absorbers
8708806000	Cast Iron Parts, SS
8708806510	Beam Hanger Brackets
8708928000	Muffler Parts & Access.
8708935000	Clutches and Parts
8708945000	Steering Wheel, Column
8708948000	Steering Wheel Parts & Acces
8708990070	Wheel Hub Units
8708995800	Wheel Hub Units
8708996100	Airbags
8708998015	Wheel Hub Units
8708998115	Wheel Hub Units

8708806590 Suspension System Parts
8708925000 Mufflers
8708935000 Clutches & Parts
8708936000 Clutches
8708937500 Parts of Clutches
8708945000 Steering Wheels, Columns
8708947510 Steering Shaft Assembly
8708947550 Parts
8708995010 Steering Shaft Assemblies
8708995020 Wheel Hub Units
8718995025 Wheel Hub Units
8708995030 Beam Hanger Brackets
8708995800 Wheel Hub Units
8708996400 Half Shafts & Drive Shafts
8708996700 Parts (joints?)
8708996710 Universal Joints->01
8708996720 Universal Joints- >01
8708996790 Other Joints->01
8708996810 Pwr Trns Univ Jnts
8708996820 Pwr Trns Univ Jnts
8708996890 Power Trans Parts
8708997030 Beam Hanger Brackets
8708997060 Suspension System Parts
8708997330 Steering Shaft Assemblies
8708997360 Parts for Steering Systems
8708998015 Wheel Hub Units
8708998115 Wheel Hub Units
8716905010 Axles & Parts for Trailers
8716905030 Wheels for Trailers

Electrical and Electric Components

8414308030 Compressors
8414596040 Fans
8414598040 Fans & Blowers
8415200000 Air Conditioners
8415830040 Air Conditioners
8415900040 Parts of Air Conditioners
8415908040 Parts of Air Conditioners
8415908045 Parts of Air Conditioners
8501324500 Electric Motors
8507100060 Storage Batteries
8507304000 Nickel-Cadmium Batteries
8507904000 Parts for Lead Acid Batteries
8511100000 Spark Plugs
8511200000 Magnetos, Dynamos
8511300040 Distributors

Electrical and Electric Components

8414308030 Compressors
8414596040 Fans
8414598040 Fans & Blowers
8415200000 Air Conditioners
8415830040 Air Conditioners
8507100050? Storage Batteries
8507100060 Storage Batteries
8507904000 Parts for Lead Acid Batteries
8507904050? Parts for Batteries?
8511100000 Spark Plugs
8511200000 Magnetos, Dynamos
8511300040 Distributors
8511300080 Ignition Coils
8511400000 Starter Motors
8511500000 Generators

8511300080	Ignition Coils
8511400000	Starter Motors
8511500000	Generators
8511802000	Voltage Regulators
8511806000	Other Engine Ignition Equip.
8511902000	Parts for Voltage Regulators
8511906020	Parts for Distributer Sets
8511906040	Other Parts Engine Ignition
8512202000	Lighting Equipment
8512202040	Lighting Equipment
8512204000	Signaling Equipment
8512204040	Signaling Equipment
8512300020	Horns
8512300030	Radar Dectectors
8512300040	Sound Signaling Equipment
8512402000	Defrosters
8512404000	Windshield Wipers
8512902000	Parts of Signaling Equipment
8512906000	Lighting Equipment Parts
8512907000	Parts of Defrosters
8512909000	Parts of Windshield Wipers
8517120020	Radio Telephones
8519812000	Cassette Tape Players
8519910020	Cassette Tape Players
8519911000	Cassette Tape Players
8519934000	Cassette Tape Players
8525201500	Radio Transceivers
8525206020	Radio Telephones
8525209020	Radio Telephones
8525601010	Radio Transceivers, CBs
8527211005	Radio-Tape Players (CDs)
8527211010	Radio-Tape Players
8527211015	Radio-Tape Players
8527211020	Radio-Tape Players
8527211025	Radio-Tape Players
8527211030	Radio-Tape Players
8527214000	Radio-Combinations
8527214040	Radio-Combinations
8527214800	Radio-Combinations
8527290020	Radio-Receivers AM
8527290040	Radio-Receivers FM/AM
8527290060	Radio-Receivers
8527294000	Radio-Receivers FM/AM
8527298000	Radio- Recievers
8527298020	Radio-Receivers AM
8527298060	Radio-Receivers
8531800038	Radar Detectors
8511802000	Voltage Regulators
8511806000	Other Engine Ignition Equip.
8511906020	Parts for Distributor Sets
8511908000	Other Elec Ignition Equip
8512202000	Lighting Equipment
8512204000	Signaling Equipment
8512300000	Sound Signaling Equip
8512300030	Radar Dectectors
8512300050	Sound Signaling Equip
8512402000	Defrosters
8512404000	Windshield Wipers
8512902000	Parts of Signaling Equip.
8512905000	Parts of Lighting Equip.
8512908000	Other Pts of Elec. Equip.
8517120020	Radio Telephones
8519934000	Cassette Tape Players
8525201000	CB Transmission Apparatus
8525206000	Other Transmission Apparat.
8525209020	Radio Telephones
8525209050?	Radio Telephones?
8525601010	Radio Receivers (CB)
8527210000	Radiobroadcast Receivers
8527290000	Other Radiobroadcast Receiv
8531800038	Radar Detectors
8531809038	Radar Detectors
8536410005	Signaling Flashers
8539100020	Beam Lamp Units
8539100040	Beam Lamp Units
8544300000	Ignition Wiring Sets
8708950000	Airbags for MV
9029100000	Revolution Counters
9029205000	Other Speedometers/Tacho
9029900000	Pts & Access of Rev Counter
9104000000	Inst Panel Clocks

8531808038 Radar Detectors
8531809038 Radar Detectors
8536410005 Signaling Flashers
8539100010 Beam Lamp Units
8539100020 Beam Lamps
8539100040 Beam Lamps
8539100050 Beam Lamp Units
8539212040 Halogen Lamps
8544300000 Ignition Wiring Sets
9029104000 Taximeters
9029108000 Revolution Counters, Odom.
9029204080 Other Speedometers, Tach.
9029902000 Parts & Access of Taximeters
9029908040 Parts & Access of Speed/Tac
9029908080 Parts & Access of Odometers
9104002510 MVT & Cases Panel Clock
9104004000 Instrument Panel Clocks
9104004510 Movements of Inst. Clock

Engines and Parts

4010101020 Belts
4016931010 O-Rings
4016931020 Oil Seals
4016931050 Gaskets
4016931090 Gaskets
8407341400 Engines
8407341540 Engines
8407341580 Engines
8407341800 Engines
8407342040 Engines
8407342080 Engines
8407344400 Engines
8407344540 Engines
8407344580 Engines
8407344800 Engines
8408202000 Compression Ignition Engine
8409911040 Cast Iron Parts
8409913000 Aluminum Cylinder Heads
8409915010 Connecting Rods
8409915080 Parts
8409919110 Connecting Rods
8409919190 Parts
8409919910 Connecting Rods
8409991040 Cast-Iron parts
8409999110 Connecting Rods
8409999190 Parts
8413301000 Fuel Injection Pumps

Engines and Parts

8407342000 SP-IG Piston Engine
8407342030 SP-IG Engine
8407342090 Other Engine
8408202000 Compression Ignition Engine
8409914000 Pts for Engines
8409994000 Other Pts for Engines
8413301000 Fuel Injection Pumps
8413309000 Fuel, Lub., Cooling Pumps
8413911000 Parts of Fuel Injection Pumps
8414308030 Compressor/Air Conditioners
8414593000 Turbochargers
8421230000 Oil or Fuel Filters
8421310000 Intake Air Filters
8483101020 Transmission Shafts
8483103010 Camshafts & Crankshafts

8413309000 Fuel, Lub., or Cooling Pumps
8413309030 Fuel Pumps
8413309060 Lubricating Pumps
8413309090 Cooling Medium Pumps
8413911000 Parts of Fuel Injection Pumps
8414593000 Turbochargers
8421230000 Oil or Fuel Filters
8421310000 Intake Air Filters
8483101030 Camshafts and Crankshafts
8483103010 Camshafts and Crankshafts
9802004020 Combust. Engine Repair
9802005030 Value of Repairs on Engines

Miscellaneous Parts

3819000000 Brake Fluid
3819000010 Brake Fluid
3819000090 Other Liquids
3820000000 Anti-Freeze
4016993000 Vibration Control
4016995010 Mechanical Articles
4016995500 Vibration Control
4016996010 Mechanical Articles
8301200030 Steering Wheel Immobilizers
8425490000 Jacks
8426910000 Lifting Machinery
8431100090 Parts of Winches, Jacks
8708407550 Parts, Radiators
8708706060 Parts & Access. for Wheels
8708915000 Radiators
8708917000 Cast Iron Parts, Radiators
8708917510 Radiator Cores
8708917550 Parts, Radiators
8708927000 Cast Iron Parts, Mufflers
8708927500 Parts, Mufflers
8708993000 Cast Iron Parts
8708947000 Cast Iron Parts
8708995005 Brake Hoses
8708995060 Radiator Cores
8708995070 Cable Traction Devices
8708995080 Parts
8708995085 Parts
8708995090 Parts
8708995200 Cast Iron Parts
8708995500 Vibration Control Goods
8708998005 Brake Hoses of Plastics
8708998045 Radiator Cores
8708998060 Cable Traction Devices

Miscellaneous Parts

3819000000 Brake Fluid
3820000000 Anti-Freeze
4016995010 Mechanical Articles
8425490000 Jacks
8426910000 Lifting Machinery
8431100090 Parts of Winches, Jacks
8708915000 Radiators
8708990050 Pts & Access
8708990090 Other Pts & Access
8708990095 Pts & Access
8708998075 Other Pts & Access
8708998175 Parts & Access NESOI
8716900000 Parts of Trailers
8716905000 Parts

8708998080 Parts
8708998105 Brake Hoses-Plastic
8708998160 Cable Traction Devices
8708998180 Parts
8716905050 Parts for Trailers
8716905060 Parts for Trailers

Automotive Tires and Tubes

4011100010 Radial Tires for M.V.
4011100050 Pneumatic Tires for M.V.
4011101000 Radial Tires for M.V.
4011101010 Radial Tires->01
4011101020 Radial Tires->01
4011101030 Radial Tires->01
4011101040 Radial Tires->01
4011101050 Radial Tires->01
4011101060 Radial Tires->01
4011101070 Radial Tires->01
4011105000 Pneumatic Tires for M.V.
4011200005 Radial Tires for Lt. Trucks
4011200010 Pneumatic Tires for Lt. Truck
4011200015 Radial Tires for Buses/Truck
4011200020 Pneumatic Tires for Buses/Tr
4011200025 Radial Tires for Buses off
4011200030 Pneumatic Tires for Buses off
4011200035 Radial Tires for Buses off
4011200050 Pneumatic Tires for Buses off
4011201005 Radial Tires for Lt. Trucks
4011201015 Pneumatic Tires for Buses/Tr
4011201025 Radial Tires for Buses off
4011201035 Pneumatic Tires for Buses off
4011205010 Tires, ex. Radial for Lt. Truc
4011205020 Pneumatic Tires for Buses
4011205030 Tires, ex. Radial, for Bus
4011205050 Pneumatic Tires for Bus
4012104005 Retreaded Tires for M.V.
4012104015 Retreaded Tires for Light on
4012104025 Retreaded Tires for Bus/Truc
4012104035 Retreaded Tires for Bus/Truc
4012105005 Retreaded Radial Tires M.V.
4012105009 Retreaded Tires for M.V.
4012105015 Retreaded Radial Tires Bus
4012105019 Retreaded Tires for Lt. Truck
4012105025 Retreaded Radial Tires Bus
4012105029 Retreaded Tires for Bus/Truc
4012105035 Retreaded Radial Tires Bus
4012105050 Retreaded Tires for Bus/Truc

Automotive Tires and Tubes

4011100010 Radial Tires for M.V.
4011100050 Pneumatic Tires for M.V.
4011101000 Radial Tires for M.V.
4011105000 Pneumatic Tires for M.V.
4011200005 Radial Tires for Lt. Trucks
4011200010 Pneumatic Tires for Lt. Truck
4011200015 Radial Tires for Buses/Truck
4011200020 Pneumatic Tires for Buses/Tr
4011200025 Radial Tires for Buses off
4011200030 Pneumatic Tires for Buses off
4011200035 Radial Tires for Buses off
4011200050 Pneumatic Tires for Buses off
4011201005 Radial Tires for Lt. Trucks
4011201015 Pneumatic Tires for Buses/Tr
4011201025 Radial Tires for Buses off
4011201035 Pneumatic Tires for Buses off
4011205010 Tires, ex Radial, for Lt. Truc
4011205020 Pneumatic Tires for Buses
4011205030 Tires, ex Radial for Bus/Tr
4011205050 Pneumatic Tire for Bus/Tr
4012105020 Retreaded Tires Bus/Truck
4012106000 Other Retreaded Tires
4012110000 Retreaded Tires
4012120000 Retreaded Tires
4012190000 Retread Tires
4012200000 Used Pneumatic Tires
4013100010 Inner Tubes
4013100020 Inner Tubes
4013900000 Other Inner Tubes

4012108009	Retreaded Tires for M.V.
4012108019	Retreaded Tires for Lt. Truck
4012108029	Retreaded Tires for Bus/Truc
4012108050	Retreaded Tires for Bus, ex.
4012114000	Retreaded Tires for Cars
4012118000	Retreaded Tires for Cars
4012124015	Retreaded Tires for Lt. Truck
4012124025	Retreaded Tires for Bus/Truc
4012124035	Retreaded Tires for Bus/Truc
4012128019	Retread Tire for Lt. Truck
4012128029	Retread Tire for Bus/Truck
4012128050	Retread Tire for Bus
4012194000	Retreaded Tires for Bus, ex.
4012198000	Retread Tire for Bus
4012205000	Used Pneumatic Tires
4012206000	Used Pneumatic Tires
4013100010	Inner Tubes
4013100020	Inner Tubes

HTS Codes Numerically Ordered

HTS Codes for Import	
3819000000	Brake Fluid
3819000010	Brake Fluid
3819000090	Other Liquids
3820000000	Anti-Freeze
4009120020	Brake Hoses
4009220020	Brake Hoses
4009320020	Brake Hoses
4009420020	Brake Hoses
4009500020	Brake Hoses
4010101020	Belts
4011100010	Radial Tires for M.V.
4011100050	Pneumatic Tires for M.V.
4011101000	Radial Tires for M.V.
4011101010	Radial Tires->01
4011101020	Radial Tires->01
4011101030	Radial Tires->01
4011101040	Radial Tires->01
4011101050	Radial Tires->01
4011101060	Radial Tires->01

Schedule B Codes for Export	
3819000000	Brake Fluid
3820000000	Anti-Freeze
4009120020	Brake Hoses
4009220020	Brake Hoses
4009320020	Brake Hoses
4009420020	Brake Hoses
4009500020	Brake Hoses
4011100010	Radial Tires for M.V.
4011100050	Pneumatic Tires for M.V.
4011101000	Radial Tires for M.V.
4011105000	Pneumatic Tires for M.V.
4011200005	Radial Tires for Lt. Trucks
4011200010	Pneumatic Tires for Lt. Truck
4011200015	Radial Tires for Buses/Truck
4011200020	Pneumatic Tires for Buses/Tr
4011200025	Radial Tires for Buses off
4011200030	Pneumatic Tires for Buses off
4011200035	Radial Tires for Buses off
4011200050	Pneumatic Tires for Buses off

4011101070	Radial Tires->01
4011105000	Pneumatic Tires for M.V.
4011200005	Radial Tires for Lt. Trucks
4011200010	Pneumatic Tires for Lt. Truck
4011200015	Radial Tires for Buses/Truck
4011200020	Pneumatic Tires for Buses/Tr
4011200025	Radial Tires for Buses off
4011200030	Pneumatic Tires for Buses off
4011200035	Radial Tires for Buses off
4011200050	Pneumatic Tires for Buses off
4011201005	Radial Tires for Lt. Trucks
4011201015	Pneumatic Tires for Buses/Tr
4011201025	Radial Tires for Buses off
4011201035	Pneumatic Tires for Buses off
4011205010	Tires, ex. Radial for Lt. Truc
4011205020	Pneumatic Tires for Buses
4011205030	Tires, ex. Radial, for Bus
4011205050	Pneumatic Tires for Bus
4012104005	Retreaded Tires for M.V.
4012104015	Retreaded Tires for Light on
4012104025	Retreaded Tires for Bus/Truc
4012104035	Retreaded Tires for Bus/Truc
4012105005	Retreaded Radial Tires M.V.
4012105009	Retreaded Tires for M.V.
4012105015	Retreaded Radial Tires Bus
4012105019	Retreaded Tires for Lt. Truck
4012105025	Retreaded Radial Tires Bus
4012105029	Retreaded Tires for Bus/Truc
4012105035	Retreaded Radial Tires Bus
4012105050	Retreaded Tires for Bus/Truc
4012108009	Retreaded Tires for M.V.
4012108019	Retreaded Tires for Lt. Truck
4012108029	Retreaded Tires for Bus/Truc
4012108050	Retreaded Tires for Bus, ex.
4012114000	Retreaded Tires for Cars
4012118000	Retreaded Tires for Cars
4012124015	Retreaded Tires for Lt. Truck
4012124025	Retreaded Tires for Bus/Truc
4012124035	Retreaded Tires for Bus/Truc
4012128019	Retread Tire for Lt. Truck
4012128029	Retread Tire for Bus/Truck
4012128050	Retread Tire for Bus
4012194000	Retreaded Tires for Bus, ex.
4012198000	Retread Tire for Bus
4012205000	Used Pneumatic Tires
4012206000	Used Pneumatic Tires
4013100010	Inner Tubes
4013100020	Inner Tubes
4016931010	O-Rings
4011201005	Radial Tires for Lt. Trucks
4011201015	Pneumatic Tires for Buses/Tr
4011201025	Radial Tires for Buses off
4011201035	Pneumatic Tires for Buses off
4011205010	Tires, ex Radial, for Lt. Truc
4011205020	Pneumatic Tires for Buses
4011205030	Tires, ex Radial for Bus/Tr
4011205050	Pneumatic Tire for Bus/Tr
4012105020	Retreaded Tires Bus/Trucks
4012106000	Other Retreaded Tires
4012110000	Retreaded Tires
4012120000	Retreaded Tires
4012190000	Retread Tires
4012200000	Used Pneumatic Tires
4013100010	Inner Tubes
4013100020	Inner Tubes
4013900000	Other Inner Tubes
4016995010	Mechanical Articles
6813100000	Brake Linings & Pads
6813200000	Friction Materials
6813810000	Brake Linings
6813890000	Other Brake Materials
6813900000	Other Friction Materials
7007110000	Safety Glass
7007211000	Windshields
7007215000	Safety Glass
7009100000	Rear-View Mirrors
7320100000	Leaf Springs
7320201000	Helical Springs
8301200000	Locks
8302103000	Hinges
8302300000	Other Mountings
8407342000	Spark Ig Piston Engines
8407342030	Spark Ig Engine
8407342090	Other Engine
8408202000	Compression Ignition Engine
8409914000	Pts for Engines
8409994000	Other Pts for Engines
8413301000	Fuel Injection Pumps
8413309000	Fuel, Lub., Cooling Pumps
8413911000	Parts of Fuel Injection Pumps
8414308030	Compressors/Air Condition
8414593000	Turbochargers
8414596040	Fans
8414598040	Fans & Blowers
8415200000	Air Conditioners
8415830040	Air Conditioners
8421230000	Oil or Fuel Filters
8421310000	Intake Air Filters

4016931020	Oil Seals
4016931050	Gaskets
4016931090	Gaskets
4016993000	Vibration Control
4016995010	Mechanical Articles
4016995500	Vibration Control
4016996010	Mechanical Articles
6813100050	Brake Linings & Pads
6813200015	Brake Linings & Pads
6813200025	Asbestos Friction
6813810050	Brk Lngs & Pads, Not Asbest
6813890050	Min Sub Friction Materials
6813900050	Friction Materials
7007110000	Safety Glass
7007110010	Safety Glass
7007211000	Windshields
7007211010	Windshields
7007215000	Safety Glass
7009100000	Rear-View Mirrors
7318160010	Lugnuts
7318160015	Lugnuts
7318160030	Lugnuts
7318160045	Other Lugnuts
7320100015	Leaf Springs
7320103000	Leaf Springs
7320106015	Leaf Springs
7320106060	Leaf Springs
7320201000	Helical Springs
8301200000	Locks
8301200030	Steering Wheel Immobilizers
8301200060	Other Locks
8302103000	Hinges
8302303000	Other Mountings
8302303010	Pneumatic Cylinders
8302303060	Other Mountings
8302306000	Other Mountings
8407341400	Engines
8407341540	Engines
8407341580	Engines
8407341800	Engines
8407342040	Engines
8407342080	Engines
8407344400	Engines
8407344540	Engines
8407344580	Engines
8407344800	Engines
8408202000	Compression Ignition Engine
8409911040	Cast Iron Parts
8409913000	Aluminum Cylinder Heads
8421394000	Catalytic Converters
8425490000	Jacks
8426910000	Lifting Machinery
8431100090	Parts of Winches, Jacks
8482101000	Ball Bearings
8482105044	Radial Bearings
8482105048	Radial Bearings
8482200020	Tapered Roller Bearings
8482200030	Tapered Roller Bearings
8482200040	Tapered Roller Bearings
8482200060	Tapered Roller Bearings
8482200070	Tapered Roller Bearings
8482200080	Tapered Roller Bearings
8482400000	Needle Roller Bearings
8482500000	Other Cylindrical Bearings
8483101020	Transmission Shafts
8483103010	Camshafts & Crankshafts
8507100050	Storage Batteries
8507100060	Storage Batteries
8507904000	Parts for Lead Acid Batteries
8507904050	Parts for Batteries
8511100000	Spark Plugs
8511200000	Magnetos, Dynamos
8511300040	Distributors
8511300080	Ignition Coils
8511400000	Starter Motors
8511500000	Generators
8511802000	Voltage Regulators
8511806000	Other Engine Ignition Equip.
8511906020	Parts for Distributor Sets
8511908000	Other Elec Ignition Equip
8512202000	Lighting Equipment
8512204000	Signaling Equipment
8512300000	Sound Signaling Equipment
8512300030	Radar Detectors
8512300050	Sound Signaling Equipment
8512402000	Defrosters
8512404000	Windshield Wipers
8512902000	Parts of Signaling Equip.
8512905000	Parts of Lighting Equipment
8512908000	Other Pts of Elec Equipment
8517120020	Radio Telephones
8519812000	Cassette Tape Players
8525201000	CB Transmission Apparatus
8525206000	Other Transmission Apparat
8525209020	Radio Telephones
8525209050	Radio Telephones
8525601010	Radio Transceivers (CB)
8527210000	Radiobroadcast Receivers

8409915010	Connecting Rods
8409915080	Parts
8409919110	Connecting Rods
8409919190	Parts
8409919910	Connecting Rods
8409991040	Cast-Iron parts
8409999110	Connecting Rods
8409999190	Parts
8413301000	Fuel Injection Pumps
8413309000	Fuel, Lub., or Cooling Pumps
8413309030	Fuel Pumps
8413309060	Lubricating Pumps
8413309090	Cooling Medium Pumps
8413911000	Parts of Fuel Injection Pumps
8414308030	Compressors
8414593000	Turbochargers
8414596040	Fans
8414598040	Fans & Blowers
8415200000	Air Conditioners
8415830040	Air Conditioners
8415900040	Parts of Air Conditioners
8415908040	Parts of Air Conditioners
8415908045	Parts of Air Conditioners
8421230000	Oil or Fuel Filters
8421310000	Intake Air Filters
8421394000	Catalytic Converters
8425490000	Jacks
8426910000	Lifting Machinery
8431100090	Parts of Winches, Jacks
8482101000	Ball Bearings
8482101040	Ball Bearings
8482101080	Ball Bearings
8482105044	Radial Bearings
8482105048	Radial Bearings
8482200010	Tapered Roller Bearings
8482200020	Tapered Roller Bearings
8482200030	Tapered Roller Bearings
8482200040	Tapered Roller Bearings
8482200050	Tapered Roller Bearings
8482200060	Tapered Roller Bearings
8482200070	Tapered Roller Bearings
8482200080	Tapered Roller Bearings
8482400000	Needle Roller Bearings
8482500000	Other Cylindrical Bearings
8483101030	Camshafts and Crankshafts
8483103010	Camshafts and Crankshafts
8501324500	Electric Motors
8507100060	Storage Batteries
8507304000	Nickel-Cadmium Batteries
8527290000	Other Radiobroadcast Receiv
8531800038	Radar Detectors
8531809038	Radar Detectors
8536410005	Signaling Flashers
8539100020	Beam Lamp Units
8539100040	Beam Lamp Units
8544300000	Ignition Wiring Sets
8707100020	Bodies
8707100040	Bodies
8707905020	Bodies
8707905040	Bodies
8707905060	Bodies
8707905080	Bodies
8708100010	Stampings of Bumpers
8708100050	Bumpers and Parts
8708210000	Seat Belts
8708290010	Stampings of Bodies
8708290025	Truck Caps
8708290050	Parts & Access. of Bodies
8708290060	Parts & Access. of Bodies
8708295025	Truck Caps
8708295070	Other Pts & Access of Bodies
8708295170	Parts & Access of Bodies
8708300010	Mounted Brake Linings
8708300050	Brakes & Servo-Brakes
8708310000	Mounted Brake Linings
8708390000	Other Brakes
8708401000	Gear Boxes
8708401110	Gear Boxes
8708401150	Gear Boxes
8708402000	Gear Boxes
8708403500	Gear Boxes
8708406000	Gear Boxes
8708408000	Gear Box Parts & Access.
8708500050	Drive Axles
8708504110	Drive Axles
8708504150	Non-Driving Axles
8708507200	Drive Axles Parts & Access.
8708600050	Non-Driving Axles
8708700050	Road Wheels & Pts.
8708800050	Suspension Shock Absorbers
8708805000	Suspension Shock Absorbers
8708807000	Suspension System Parts
8708915000	Radiators
8708918000	Radiator Parts & Access.
8708925000	Radiators
8708928000	Muffler Parts & Access.
8708935000	Clutches and Parts
8708945000	Steering Wheel, Column

8507904000	Parts for Lead Acid Batteries
8511100000	Spark Plugs
8511200000	Magnetos, Dynamos
8511300040	Distributors
8511300080	Ignition Coils
8511400000	Starter Motors
8511500000	Generators
8511802000	Voltage Regulators
8511806000	Other Engine Ignition Equip.
8511902000	Parts for Voltage Regulators
8511906020	Parts for Distributer Sets
8511906040	Other Parts Engine Ignition
8512202000	Lighting Equipment
8512202040	Lighting Equipment
8512204000	Signaling Equipment
8512204040	Signaling Equipment
8512300020	Horns
8512300030	Radar Dectector
8512300040	Sound Signaling Equipment
8512402000	Defrosters
8512404000	Windshield Wipers
8512902000	Parts of Signaling Equipment
8512906000	Lighting Equipment Parts
8512907000	Parts of Defrosters
8512909000	Parts of Windshield Wipers
8517120020	Radio Telephones
8519812000	Cassette Tape Players
8519910020	Cassette Tape Players
8519911000	Cassette Tape Players
8519934000	Cassette Tape Players
8525201500	Radio Transceivers
8525206020	Radio Telephones
8525209020	Radio Telephones
8525601010	Radio Transceivers, CBs
8527211005	Radio-Tape Players (CDs)
8527211010	Radio-Tape Players
8527211015	Radio-Tape Players
8527211020	Radio-Tape Players
8527211025	Radio-Tape Players
8527211030	Radio-Tape Players
8527214000	Radio-Combinations
8527214040	Radio-Combinations
8527214800	Radio-Combinations
8527290020	Radio-Receivers AM
8527290040	Radio-Receivers FM/AM
8527290060	Radio-Receivers
8527294000	Radio-Receivers FM/AM
8527298000	Radio Recievers
8527298020	Radio-Receivers AM
8708948000	Steering Wheel Parts & Acces
8708950000	Airbags for MVs
8708990045	Slide-in Campers
8708990050	Pts & Access.
8708990070	Wheel Hub Units
8708990090	Other Pts & Access
8708990095	Pts & Access
8708995800	Wheel Hub Units
8708996100	Airbags
8708998015	Wheel Hub Units
8708998030	Slide-In Campers
8708998075	Other Pts & Access
8708998115	Wheel Hub Units
8708998130	Slide-in Campers
8708998175	Parts & Access NESOI
8716900000	Parts of Trailers
8716905000	Parts
9029100000	Revolution Counters
9029205000	Other Speedometers/Tacho
9029900000	Pts & Access of Rev Counter
9104000000	Inst Panel Clocks
9401200000	Seats
9401901000	Seat Parts
9401901010	Seat Parts of Leather
9401901080	Seat Parts
9403901000	Parts of Furnitures

8527298060	Radio-Receivers
8531800038	Radar Detectors
8531808038	Radar Detectors
8531809038	Radar Detectors
8536410005	Signaling Flashers
8539100010	Beam Lamp Units
8539100020	Beam Lamp
8539100040	Beam Lamp
8539100050	Beam Lamp Units
8539212040	Halogen Lamps
8544300000	Ignition Wiring Sets
8707100020	Bodies
8707100040	Bodies
8707905020	Bodies
8707905040	Bodies
8707905060	Bodies
8707905080	Bodies
8708100010	Stampings of Bumpers
8708100050	Bumpers and Parts
8708103010	Stampings of Bumpers
8708103050	Bumpers
8708106010	Stampings Parts of Bumpers
8708106050	Parts of Bumpers
8708210000	Seat Belts
8708290010	Stampings of Bodies
8708290025	Truck Caps
8708290050	Parts & Access. of Bodies
8708290060	Parts & Access. of Bodies
8708291000	Inflators & Modules Airbags
8708291500	Door Assemblies
8708292000	Body Stampings
8708295010	Stampings
8708295025	Truck Caps
8708295060	Other Parts
8708301090	Brakes and Parts
8708305020	Brake Drums
8708305030	Brake Rotors
8708305040	Brake Linings
8708305090	Brake Parts
8708315000	Mounted Brake Linings
8708391090	Brakes & Parts
8708395010	Brake Drums & Rotors
8708395020	Brake Drums
8708395030	Brake Rotors
8708395050	Brakes & Servo-Brakes
8708401000	Gear Boxes
8708401110	Gear Boxes
8708401150	Gear Boxes
8708402000	Gear Boxes

8708405000	Gear Boxes
8708407000	Cast Iron Parts, Gear Box
8708407550	Parts, Radiators
8708503000	Drive Axles
8708505000	Drive Axles
8708505110	Drive Axles
8708505150	Non-Driving Axles
8708506100	Drive Axles
8708506500	Non-Driving Axles, NESOI
8708507900	Non-Driving Axles Parts
8708508000	Drive Axles
8708508100	Cast Iron Parts, Drive Axles
8708508500	Parts, Drive Shaft
8708508900	Parts, Drive Axles
8708509110	Spindles of Non-Driving Axle
8708509150	Non-Driving Axles Parts
8708509300	Cast Iron Parts, Drive Axles
8708509500	Parts, Drive Shaft
8708509900	Parts, Drive Axles
8708605000	Non-Driving Axles
8708608010	Spindles
8708608050	Non-Driving Axles
8708704530	Road Wheels
8708704545	Road Wheels
8708704560	Wheel Rims
8708706030	Wheel Covers
8708706045	Wheel Covers & Hubcaps
8708706060	Parts & Access. for Wheels
8708708010	Wheels
8708708015	Wheels
8708708025	Wheels
8708708030	Wheels
8708708035	Wheels
8708708045	Wheel Rims
8708708050	Parts & Access. for Wheels
8708708060	Wheel Covers & Hubcaps
8708708075	Parts & Access. for Wheels
8708801300	Suspension Shock Absorbers
8708801600	Suspension Shock Absorbers
8708803000	Suspension Shock Absorbers
8708804500	Suspension Shock Absorbers
8708805000	Suspension Shock Absorbers
8708806000	Cast Iron Parts, SS
8708806510	Beam Hanger Brackets
8708806590	Parts for Suspension System
8708915000	Radiators
8708917000	Cast Iron Parts, Radiators
8708917510	Radiator Cores
8708917550	Parts, Radiators

8708925000	Mufflers
8708927000	Cast Iron Parts, mufflers
8708927500	Parts, Mufflers
8708935000	Clutches & Parts
8708936000	Clutches
8708937500	Parts of Clutches
8708945000	Steering Wheels, Columns
8708947000	Cast Iron Parts
8708947510	Steering Shaft Assembly
8708947550	Parts, Steering
8708950500	Inflators
8708952000	Parts, Airbags
8708993000	Cast Iron Parts
8708995005	Brake Hoses
8708995010	Steering Shaft Assemblies
8708995020	Wheel Hub Units
8708995030	Beam Hanger Brackets
8708995045	Slide in Campers
8708995060	Radiator Cores
8708995070	Cable Traction Devices
8708995080	Parts
8708995085	Parts
8708995090	Parts
8708995200	Cast Iron Parts
8708995500	Vibration Control Goods
8708995800	Wheel Hub Units
8708996100	Airbags
8708996400	Half Shafts & Drive Shafts
8708996700	Parts (joints?)
8708996710	Universal Joints->01
8708996720	Universal Joints- >01
8708996790	Other Joints->01
8708996810	Parts Pwr Trns, Univ Jnts
8708996820	Parts Pwr Trns, Univ Jnts
8708996890	Parts Power Train
8708997030	Beam Hanger Brackets
8708997060	Suspension System Parts
8708997330	Steering Shaft Assemblies
8708997360	Parts for Steering Systems
8708998005	Brake Hoses of Plastics
8708998015	Wheel Hub Units
8708998045	Radiator Cores
8708998060	Cable Traction Devices
8708998080	Parts
8708998105	Brake Hoses- Plastic
8708998115	Wheel Hub Units
8708998160	Cable Traction Devices
8708998180	Parts
8716905010	Axles & Parts for Trailers

8716905030	Wheels for Trailers
8716905050	Parts for Trailers
8716905060	Parts for Trailers
8718995025	Wheel Hub Units
9029104000	Taximeters
9029108000	Revolution Counters, Odom.
9029204080	Other Speedometers, Tach.
9029902000	Parts & Access of Taximeters
9029908040	Parts & Access of Speed/Tac
9029908080	Parts & Access of Odometers
9104002510	MVT & Cases Panel Clock
9104004000	Instrument Panel Clocks
9104004510	Movements of Inst. Clock
9401200000	Seats
9401200010	Child Safety Seats
9401200090	Seats
9401901000	Seat Parts
9401901010	Seat Parts of Leather
9401901020	Seat Parts of Textile
9401901080	Seat Parts
9401901085	Seat Parts
9403406000	Wooden Furniture for M.V.
9403506000	Wooden Furniture for M.V.
9403901000?	Furniture
9403901040	Parts of Furniture for M.V.
9403901050	Parts of Furniture for M.V.
9403901080	Parts of Furniture for M.V.
9403901085	Parts of Furniture for M.V.
9802004020	Combust. Engine Repair
9802005030	Value of Repairs on Engines

North American Industry Classification System (NAICS)

335911	Storage Battery Mfg
336211	Motor Vehicle Body Mfg
336311	Carburetor, Piston, Piston Ring, & Valve Mfg
336312	Gasoline Engine & Engine Parts Mfg
336321	Vehicular Lighting Equipment Mfg
336322	Other Motor Vehicle Electrical & Electronic Equipment Mfg
336330	Motor Vehicle Steering & Suspension Component
336340	Motor Vehicle Brake System Mfg
336350	Motor Vehicle Transmission & Power Train Parts Mfg
336360	Motor Vehicle Seating & Interior Trim Mfg
336370	Motor Vehicle Metal Stamping
336391	Motor Vehicle Air-Conditioning Mfg
336399	All Other Motor Vehicle Parts Mfg

Table 1

Statistics for All U.S. Manufacturing Establishments										
	2002	Chg*	2003	Chg*	2004	Chg*	2005	Chg*	2006	Chg*
All Employees	14,664,385	-7.5%	13,872,958	-5.4%	13,394,079	-3.5%	13,161,880	-1.7%	12,990,344	-1.3%
Empoyee Payroll ($1,000)	575,165,127	-2.8%	567,602,408	-1.3%	569,703,575	0.4%	580,358,985	1.9%	592,342,060	2.1%
Production Workers	10,319,528	-8.0%	9,796,581	-5.1%	9,365,130	-4.4%	9,235,635	-1.4%	9,179,071	-0.6%
Production Worker Hours (1,000)	20,431,721	-8.7%	19,853,892	-2.8%	19,283,817	-2.9%	19,055,800	-1.2%	18,786,191	-1.4%
Production Worker Wages ($1,000)	336,540,063	-1.7%	330,480,113	-1.8%	332,873,474	0.7%	337,980,878	1.5%	344,285,109	1.9%
Value of Industry Shipments ($1,000)**	3,914,719,163	-1.4%	4,015,387,243	2.6%	4,308,970,620	7.3%	4,742,076,879	10.1%	5,019,963,474	5.9%

Source: *Annual Survey of Manufacturers, 2006,* U.S. Department of Commerce, Bureau of the Census. * = From Previous Year

** = Industry Shipments are products shipped by industry establishments.

Table 2

Statistics for U.S. Motor Vehicle Parts Manufacturing, NAICS 336211 and 3363										
	2002	Chg*	2003	Chg*	2004	Chg*	2005	Chg*	2006	Chg*
All Employees	763,105	-1.9%	712,864	-6.6%	688,627	-3.4%	661,268	-4.0%	628,430	-5.0%
Empoyee Payroll ($1,000)	33,562,404	2.2%	33,189,602	-1.1%	33,192,112	0.0%	31,847,957	-4.0%	30,632,238	-3.8%
Production Workers	605,016	-1.7%	557,259	-7.9%	538,579	-3.4%	515,023	-4.4%	489,027	-5.0%
Production Worker Hours (1,000)	1,200,273	-2.3%	1,157,384	-3.6%	1,121,885	-3.1%	1,060,590	-5.5%	1,012,752	-4.5%
Production Worker Wages ($1,000)	24,593,055	3.8%	24,022,454	-2.3%	24,011,281	0.0%	22,751,447	-5.2%	21,991,146	-3.3%
Value of Industry Shipments ($1,000)**	212,537,954	11.4%	210,941,156	-0.8%	212,079,070	0.5%	216,902,592	2.3%	214,023,641	-1.3%
Value of Product Shipments ($1,000)***	203,595,011	8.0%	202,394,646	-0.6%	204,813,969	1.2%	208,448,296	1.8%	206,000,093	-1.2%

Source: *Annual Survey of Manufacturers, 2006,* U.S. Department of Commerce, Bureau of the Census. * = From Previous Year

** = Industry Shipments are products shipped by industry establishments. *** = Product Shipments are all products regardless of industry establishment.

Table 3

U.S. Exports of Automotive Parts ($millions)

	2001	%Chg	2002	%Chg	2003	%Chg	2004	%Chg	2005	%Chg	2006	%Chg	2007	%Chg
Parts Exports	49,794	-7.3%	50,087	0.6%	48,501	-3.2%	52,628	8.5%	55,054	4.6%	58,864	6.9%	61,954	5.2%
All Export Commodities	731,026	-6.3%	693,257	-5.2%	723,743	4.4%	816,548	12.8%	904,380	10.8%	1,037,143	14.7%	1,162,708	12.1%
% Share	6.8%	-1.0%	7.2%	6.1%	6.7%	-7.2%	6.4%	-3.8%	6.1%	-5.5%	5.7%	-6.8%	5.3%	-6.1%

Source: U.S. Census Bureau

Table 4

Total World Original Equipment Parts Market

	2001	% Change	2002	% Change	2003	% Change	2004	% Change	2005	% Change	2006	% Change
OE Parts Market ($millions)	711,808	-6.3%	729,656	2.5%	802,850	10.0%	842,960	5.0%	781,650	-7.3%	727,123	-7.0%
Total OE Parts per Vehicle ($)	12,992	-3.0%	13,029	0.3%	13,637	4.7%	13,586	-0.4%	12,304	-9.4%	10,991	-10.7%

Source: OESA Industry Review 2007/2008

Table 5

U.S. Original Equipment and Aftermarket Parts Market

	2000	2001	2002	2003	2004	2005	2006	2007
Size of U.S OE and Aftermarket Parts Market ($US Billions)	220.5	207.9	213.3	237.6	241.4	245.0	236.4	228.6
OE & Aftermarket Parts Sourced from U.S. Suppliers* ($US Billions)	153.5	145.2	144.2	163.1	157.9	152.9	141.2	129.8
% of Total Parts Market	69.6%	69.8%	67.6%	68.7%	65.4%	62.4%	59.7%	56.8%
Imports of Parts ($US Billions)	67.0	62.7	69.1	74.5	83.4	92.2	95.2	98.8
% of Total Parts Market	30.4%	30.2%	32.4%	31.3%	34.6%	37.6%	40.3%	43.2%
Imports from Canada	17.6	15.8	17.2	18.6	20.2	21.6	20.4	20.1
% of Parts Imports	26.3%	25.2%	24.9%	24.9%	24.2%	23.4%	21.5%	20.4%
% of Total Parts Market	8.0%	7.6%	8.1%	7.8%	8.4%	8.8%	8.6%	8.8%
Imports from Mexico	18.7	18.2	20.1	21.0	23.1	24.9	26.4	28.3
% of Parts Imports	27.9%	29.0%	29.0%	28.3%	27.7%	27.0%	27.7%	28.6%
% of Total Parts Market	8.5%	8.7%	9.4%	8.9%	9.6%	10.2%	11.2%	12.4%
Imports from Japan	14.5	13.2	13.5	13.8	15.5	16.5	15.4	14.2
% of Parts Imports	21.7%	21.0%	19.5%	18.5%	18.6%	17.9%	16.2%	14.4%
% of Total Parts Market	6.6%	6.3%	6.3%	5.8%	6.4%	6.7%	6.5%	6.2%
Imports from China	1.6	1.8	2.2	2.8	3.9	5.4	6.9	8.5
% of Parts Imports	2.4%	2.8%	3.2%	3.7%	4.7%	5.9%	7.3%	8.6%
% of Total Parts Market	0.7%	0.8%	1.1%	1.2%	1.6%	2.2%	2.9%	3.7%
Imports from all other countries	14.5	13.9	16.1	18.3	20.8	23.8	26.1	27.7
% of Parts Imports	21.7%	22.1%	23.2%	24.6%	24.9%	25.8%	27.4%	28.0%
% of Total Parts Market	6.6%	6.7%	7.5%	7.7%	8.6%	9.7%	11.0%	12.1%

*U.S. Suppliers include U.S. Affiliates of Foreign Manufacturers.

Source: DesRosiers

Table 6

U.S. Original Equipment Parts Market

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006E
Size of U.S OE Parts Market ($US Billions)	147.7	162.9	190.0	178.1	164.8	168.5	184.4	191.1	193.1	184.0
Content per Vehicle ($US)	12,085	13,096	14,136	13,714	14,103	13,450	14,935	15,665	16,003	16,307
OE Parts Sourced from U.S. Suppliers* ($US Billions)	108.4	121.3	142.4	126.4	116.5	113.8	104.4	95.0		
% of Total OE Parts Market	73.4%	74.5%	74.9%	71.0%	70.7%	67.5%	56.6%	49.7%	0.0%	0.0%
Imports of Parts ($US Billions)	39.4	41.6	47.7	51.7	48.3	53.4	57.7	64.6		
% of Total OE Parts Market	26.7%	25.5%	25.1%	29.0%	29.3%	31.7%	31.3%	33.8%	0.0%	0.0%
Imports from Canada	11.4	12.2	14.3	14.7	13.1	14.5	15.7	17.0		
% of Parts Imports	28.9%	29.3%	30.0%	28.4%	27.1%	27.2%	27.2%	26.3%	#DIV/0!	#DIV/0!
% of Total OE Parts Market	7.7%	7.5%	7.5%	8.3%	7.9%	8.6%	8.5%	8.9%	0.0%	0.0%
Imports from Mexico	10.2	10.9	12.5	13.8	13.2	15.0	15.8	17.6		
% of Parts Imports	25.9%	26.2%	26.2%	26.7%	27.3%	28.1%	27.4%	27.2%	#DIV/0!	#DIV/0!
% of Total OE Parts Market	6.9%	6.7%	6.6%	7.7%	8.0%	8.9%	8.6%	9.2%	0.0%	0.0%
Imports from Japan	10.9	9.6	10.3	12.0	11.1	11.2	11.4	13.0		
% of Parts Imports	27.7%	23.1%	21.6%	23.2%	23.0%	21.0%	19.8%	20.1%	#DIV/0!	#DIV/0!
% of Total OE Parts Market	7.4%	5.9%	5.4%	6.7%	6.7%	6.6%	6.2%	6.8%	0.0%	0.0%
Imports from China	0.3	0.4	0.6	0.8	1.0	1.3	1.7	2.4		
% of Parts Imports	0.8%	1.0%	1.3%	1.5%	2.1%	2.4%	2.9%	3.7%	#DIV/0!	#DIV/0!
% of Total OE Parts Market	0.2%	0.2%	0.3%	0.4%	0.6%	0.8%	0.9%	1.3%	0.0%	0.0%
Imports from all other countries	6.5	8.5	9.9	10.3	10.0	11.4	13.1	14.6		
% of Parts Imports	16.5%	20.4%	20.8%	19.9%	20.7%	21.3%	22.7%	22.6%	#DIV/0!	#DIV/0!
% of Total OE Parts Market	4.4%	5.2%	5.2%	5.8%	6.1%	6.8%	7.1%	7.6%	0.0%	0.0%

*U.S. Suppliers include U.S. Affiliates of Foreign Manufacturers.

Source: DesRosiers and Automotive News

Table 7

Top 10 Global OEM Suppliers

	2001	Global OEM Sales	2002	Global OEM Sales	2003	Global OEM Sales	2004	Global OEM Sales	2005	Global OEM Sales	2006	Global OEM Sales
	Company	($Millions)	**Company**	($Millions)	**Company**	($Millions)	**Company**	($Millions)	**Company**	($Millions)	**Company**	($Millions)
1	Delphi Corp.	24,188	Delphi Corp.	25,527	Delphi Corp.	26,200	Robert Bosch GmbH	26,800	Robert Bosch Gmbh	28,418	Robert Bosch Gmbh	29,687
2	Robert Bosch GmbH	18,000	Robert Bosch GmbH	19,085	Robert Bosch GmbH	23,200	Delphi Corp.	24,104	Delphi Corp.	26,900	Delphi Corp.	26,400
3	Visteon Corp.	16,945	Visteon Corp.	16,900	Denso Corp.	16,856	Magna International Inc.	20,653	Denso Corp.	22,871	Denso Corp.	24,000
4	Denso Corp.	16,250	Denso Corp.	15,348	Visteon Corp.	16,513	Denso Corp.	19,927	Magna International Inc.	22,800	Magna International Inc.	23,883
5	Lear Corp.	13,625	Lear Corp.	14,400	Lear Corp.	15,747	Johnson Controls Inc.	19,300	Johnson Controls Inc.	19,400	Johnson Controls Inc.	19,500
6	Johnson Controls In.	13,620	Johnson Controls In.	13,653	Magna Int'l Inc.	15,345	Visteon Corp.	17,700	Aisin Seiki Co.	17,909	Aisin Seiki Co.	19,367
7	Magna Int'l Inc.	10,500	Magna Int'l Inc.	12,188	Johnson Controls Inc.	15,192	Lear Corp.	17,000	Lear Corp.	17,089	Lear Corp.	17,839
8	TRW Automotive	9,600	Aisin Seiki Co. Ltd.	10,716	Aisin Seiki Co. Ltd.	13,534	Aisin Seiki Co. Ltd	15,508	Visteon Corp.	15,876	Faurecia	15,000
9	Faurecia	8,600	Faurecia	10,000	Faurecia	12,700	Faurecia	13,327	Faurecia	14,000	Valeo SA	12,700
10	Aisin Seiki Co. Ltd.	8,460	TRW Automotive	9,900	TRW Automotive	11,300	Siemens VDO Automotive	11,600	TRW Automotive Inc.	11,726	TRW Automotive Inc.	12,162
Top 10 Tota		139,788		147,717		166,587		185,919		196,989		200,538
Top 100 Tot		347,900		353,385		401,545		501,807		475,490		533,000

Source: Automotive News. *calculated estimate. **American Axle and Manufacturing Holdings Inc.

Top 10 OE Suppliers for North America

	2001	NA Sales	2002	NA Sales	2003	NA Sales	2004	NA Sales	2005	NA Sales	2006	NA Sales
	Company	($Millions)	**Company**	($Millions)	**Company**	($Millions)	**Company**	($Millions)	**Company**	($Millions)	**Company**	($Millions)
1	Delphi Corp.	18,867	Delphi Corp	19,656	Delphi Corp	19,450	Delphi Corp	17,596	Delphi Corp.	18,292	Delphi Corp.	16,896
2	Visteon Corp	11,736	Visteon Corp.	12,168	Visteon Corp.	11,080	Visteon Corp.	11,328	Magna International Inc.	12,768	Magna International Inc.	12,897
3	Lear Corp	8,858	Lear Corp.	9,504	Lear Corp.	9,448	Magna Int'l Inc.	10,326	Visteon Corp.	9,684	Lear Corp.	9,811
4	Johnson Controls Inc	7,353	Johnson Controls Inc.	7,687	Magna Int'l Inc.	8,736	Johnson Controls Inc.	9,650	Lear Corp.	9,228	Johnson Controls Inc.	8,580
5	Magna Intl Inc	7,140	Magna Int'l Inc.	7,650	Johnson Controls Inc.	8,021	Lear Corp.	9,350	Johnson Controls Inc.	8,924	Dana Corp.	5,187
6	Dana Corp	5,250	Dana Corp.	5,340	Dana Corp.	5,543	Dana Corp.	5,209	Dana Corp.	5,425	Denso Int'l America Inc.	4,560
7	TRW Automotive	4,992	TRW Automotive	4,950	Robert Bosch Corp.	5,336	Robert Bosch Corp.	4,556	Robert Bosch Corp.	4,831	Robert Bosch Corp.	4,453
8	Robert Bosch Corp.	4,120	Robert Bosch Corp.	4,390	TRW Automotive	4,633	Denso Int'l America Inc.	4,384	Denso Int'l America Inc.	4,803	TRW Automotive Inc.	4,135
9	Denso Intl America Inc.	3,689	Denso Int'l America Inc.	3,769	ThyssenKrupp***	4,401	TRW Automotive	4,235	ArvinMeritor	4,499	Visteon Corp.	4,131
10	ArvinMeritor Inc	2,045	American Axle & Manu.**	3,341	Denso Int'l America Inc.	3,894	ThyssenKrupp***	4,021	TRW Automotive Inc.	4,456	ArvinMeritor	4,090
Top 10 Tota		74,050		78,455		80,542		80,655		82,910		74,740
Top 150 Tot		166,400		182,100		186,714		197,577		203,106		195,987

Source: Automotive News. *calculated estimate. **American Axle and Manufacturing Holdings Inc. ***ThyssenKrupp Automotive AG

Table 8

Employment in the U.S. Automotive Parts Industry, Thousands

NAICS	Description	2002	% Change	2003	% Change	2004	% Change	2005	% Change	2006	% Change	2007	% Change
336211	Motor Vehicle Bodies	68.3	-9.9%	61.9	-9.4%	64.5	4.2%	65.9	2.2%	67.9	3.0%	63.5	-6.5%
3363	Motor Vehicle Parts	733.6	-5.3%	707.8	-3.5%	692.1	-2.2%	678.1	-2.0%	654.7	-3.5%	608.9	-7.0%
33631	MV Gasoline Engine and Parts	93.0	-3.8%	85.5	-8.1%	80.2	-6.2%	76.3	-4.9%	73.2	-4.1%	66.8	-8.7%
336311	Carburators, Pistons, Rings, and Valves	19.9	-6.6%	17.7	-11.1%	16.1	-9.0%	14.9	-7.5%	13.2	-11.4%		
336312	Gasoline Engine and Engine Parts	73.1	-3.2%	67.8	-7.3%	64.1	-5.5%	61.5	-4.1%	58.2	-5.4%		
33632	MV Electric Equipment	110.1	-8.3%	104.0	-5.5%	100.5	-3.4%	95.8	-4.7%	90.8	-5.2%	79.5	-12.4%
336321	Vehicular Lighting Equipment	17.2	-3.4%	17.2	0.0%	16.6	-3.5%	16.8	1.2%	16.2	-3.6%	13.7	-15.4%
336322	Other MV Electric Equpment	92.9	-9.2%	86.9	-6.5%	83.8	-3.6%	79.0	-5.7%	74.6	-5.6%	65.9	-11.7%
33633	MV Steering and Suspension Parts	47.4	-8.0%	44.6	-5.9%	43.4	-2.7%	43.5	0.2%	42.4	-2.5%	37.8	-10.8%
33634	MV Brake Systems	45.3	-2.8%	45.9	1.3%	45.1	-1.7%	42.9	-4.9%	40.3	-6.1%	35.7	-11.4%
33635	MV Power Train Components	91.7	-4.2%	91.2	-0.5%	85.7	-6.0%	85.0	-0.8%	81.2	-4.5%	74.9	-7.8%
33636	MV Seating and Interior Trim	62.0	-4.5%	62.2	0.3%	66.1	6.3%	64.3	-2.7%	62.7	-2.5%	63.5	1.3%
33637	MV Metal Stamping	105.5	-5.5%	101.9	-3.4%	99.0	-2.8%	98.6	-0.4%	95.6	-3.0%	90.5	-5.3%
33639	Other MV Parts	178.5	-4.8%	172.4	-3.4%	172.1	-0.2%	171.7	-0.2%	168.5	-1.9%	160.3	-4.9%
Total	**336211+3363**	**801.9**	**-5.7%**	**769.7**	**-4.0%**	**756.6**	**-1.7%**	**744.0**	**-1.7%**	**722.6**	**-2.9%**	**672.4**	**-6.9%**

Source: Bureau of Labor Statistics

Table 9

Employment in the U.S. Automotive Parts Industry

NAICS	2001	% Change	2002	% Change	2003	% Change	2004	% Change	2005	% Change	2006	% Change
Bodies and Body Parts												
336211	41,771	-4.7%	41,450	-0.8%	40,874	-1.4%	43,779	7.1%	48,396	10.5%	50,702	4.8%
336360	52,670	-9.2%	53,957	2.4%	53,120	-1.6%	50,029	-5.8%	47,106	-5.8%	47,321	0.5%
336370	112,488	-3.9%	126,137	12.1%	109,023	-13.6%	107,372	-1.5%	99,365	-7.5%	95,398	-4.0%
Total	206,929	-5.5%	221,544	7.1%	203,017	-8.4%	201,180	-0.9%	194,867	-3.1%	193,421	-0.7%
Chassis and Drivetrain Parts												
336330	47,015	-7.8%	41,783	-11.1%	39,696	-5.0%	38,223	-3.7%	37,399	-2.2%	35,341	-5.5%
336340	38,736	-12.6%	42,356	9.3%	41,097	-3.0%	39,738	-3.3%	37,198	-6.4%	32,923	-11.5%
336350	98,753	-12.0%	101,828	3.1%	90,998	-10.6%	91,232	0.3%	80,494	-11.8%	76,874	-4.5%
Total	184,504	-11.1%	185,967	0.8%	171,791	-7.6%	169,193	-1.5%	155,091	-8.3%	145,138	-6.4%
Electrical and Electronic Parts												
336321	14,665	-2.6%										
336322	94,812	-7.6%										
33632	109,477	-6.9%	97,111	-11.3%	90,843	-6.5%	77,532	-14.7%	80,892	4.3%	72,620	-10.2%
336391	19,594	-3.9%	18,870	-3.7%	19,229	1.9%	19,423	1.0%	17,011	-12.4%	15,825	-7.0%
Total	129,071	-6.5%	115,981	-10.1%	110,072	-5.1%	96,955	-11.9%	97,903	1.0%	88,445	-9.7%
Engines and Engine Parts												
336311	16,656	-6.2%										
336312	71,979	-8.4%										
33631	88,635	-8.0%	94,092	6.2%	87,729	-6.8%	81,341	-7.3%	73,016	-10.2%	69,087	-5.4%
Total	88,635	-8.0%	94,092	6.2%	87,729	-6.8%	81,341	-7.3%	73,016	-10.2%	69,087	-5.4%
Miscellaneous Automotive Parts												
336399	168,635	-9.2%	145,521	-13.7%	140,255	-3.6%	139,957	-0.2%	140,392	0.3%	132,339	-5.7%
Total	168,635	-9.2%	145,521	-13.7%	140,255	-3.6%	139,957	-0.2%	140,392	0.3%	132,339	-5.7%
Total	**777,774**	**-8.1%**	**763,105**	**-1.9%**	**712,864**	**-6.6%**	**688,626**	**-3.4%**	**661,269**	**-4.0%**	**628,430**	**-5.0%**

Source: U.S. Department of Commerce, *Annual Survey of Manufacturers*. http://www.census.gov/mcd/asmhome.html

Table 10

Acquisitions of U.S. Automotive Parts Companies (SIC 3714)

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Number of all Deals*	47	59	52	33	38	30	37	26	32
Value of all Deals* ($Millions)	3,766.4	11,570.7	18,620.0	6,395.3	1,117.5	12129.5	7516.2	2102.7	789.5

Source: Thomson Financial IBCM in AAIA *Aftermarket Factbook 2006/2007.*

*Includes deals with and without reported values.

U.S. AUTOMOTIVE PARTS TRADE BALANCE, 1999 - 2007 **Table 11**

In millions of dollars

Region/Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	% Chg
WORLD	**-11,719**	**-13,239**	**-12,932**	**-19,002**	**-25,968**	**-30,816**	**-37,100**	**-36,315**	**-36,818**	**1.4%**
FT900 World	**-14,543**	**-15,080**	**-14,719**	**-20,116**	**-25,704**	**-30,045**	**-36,169**	**-35,788**	**-27,386**	**-23.5%**
ASIA and the PACIFIC										
Select ASEAN										
Indonesia	-237	-236	-261	-298	-274	-328	-363	-457	-525	14.9%
Malaysia	-218	-251	-218	-234	-229	-254	-208	-177	-277	56.4%
Philippines	-268	-355	-331	-290	-298	-328	-332	-401	-471	17.4%
Singapore	-28	-21	-4	8	42	43	53	142	164	15.6%
Thailand	-294	-272	-326	-460	-433	-485	-563	-814	-1,029	26.5%
Total **ASEAN** (1)	**-1,043**	**-1,133**	**-1,135**	**-1,276**	**-1,201**	**-1,367**	**-1,428**	**-1,766**	**-2,252**	**27.6%**
Chinese Economic Area										
China	-1,033	-1,410	-1,501	-1,898	-2,278	-3,249	-4,784	-6,112	-7,395	21.0%
Hong Kong	53	35	41	23	-5	0	-20	-18	22	-222.0%
Taiwan	-978	-954	-1,010	-1,217	-1,233	-1,493	-1,634	-1,677	-1,815	8.2%
Total **Chinese Economic Are**	**-1,958**	**-2,330**	**-2,470**	**-3,092**	**-3,516**	**-4,742**	**-6,439**	**-7,808**	**-9,187**	**17.7%**
Select Other Asia and the Pacific										
Australia	316	449	391	416	451	548	551	683	729	6.7%
India	-115	-149	-142	-163	-192	-268	-390	-481	-528	9.6%
Japan	**-10,883**	**-12,318**	**-11,141**	**-11,213**	**-11,695**	**-13,961**	**-14,999**	**-13,629**	**-12,482**	**-8.4%**
Korea	-322	-628	-753	-1,051	-1,238	-1,400	-2,148	-3,166	-3,338	5.4%
EUROPE										
Select European Union										
Austria	953	826	916	722	275	247	441	530	92	-82.7%
Belgium	258	288	266	304	283	252	163	226	243	7.3%
France	-1,022	-767	-759	-843	-856	-879	-815	-663	-503	-24.2%
Germany	-2,502	-2,900	-2,630	-3,395	-4,407	-4,891	-5,330	-5,541	-6,702	21.0%
Italy	-336	-338	-367	-530	-611	-741	-828	-704	-799	13.4%
Netherlands	141	262	260	246	227	228	277	262	239	-8.7%
Spain	-258	-180	-176	-246	-286	-331	-264	-268	-211	-21.3%
Sweden	-88	-98	-61	-58	-21	-105	-248	-353	-33	-90.8%
United Kingdom	72	51	260	-34	-6	-51	-282	-175	50	-128.2%
Total **European Union** (2)	**-2,843**	**-2,868**	**-2,327**	**-3,932**	**-5,513**	**-6,394**	**-7,028**	**-6,838**	**-7,701**	**12.6%**
Select Other Europe										
Czech Republic	-33	-46	-78	-114	-141	-149	-218	-218	-307	41.1%
Hungary	-36	-64	-80	-128	-249	-164	-160	-152	-126	-17.2%
Poland	4	-29	-29	-42	-78	-82	-64	-62	-74	20.7%
Russia	12	11	25	15	22	26	43	113	115	1.7%
Total **Other Europe**	**-53**	**-128**	**-161**	**-269**	**-446**	**-369**	**-400**	**-318**	**-393**	**23.3%**
WESTERN HEMISPHERE										
Select Andean Community										
Colombia	63	73	66	56	52	89	89	95	105	10.0%
Peru	33	19	23	19	29	26	48	49	79	58.8%
Venezuela	183	302	436	138	-23	202	412	567	666	17.5%
Total **Andean Community** (3)	**300**	**426**	**598**	**262**	**109**	**375**	**629**	**767**	**906**	**18.2%**
Select Central America										
Honduras	-5	-34	-20	-41	-64	-87	-153	-222	-220	-1.0%
Panama	31	24	17	16	14	14	19	27	42	54.3%
Total **Central America** (4)	**120**	**69**	**73**	**46**	**-38**	**-144**	**-264**	**-305**	**-306**	**0.2%**
Select MERCOSUR										
Argentina	57	49	-120	-186	-92	-46	-14	2	55	2335.4%
Brazil	-905	-847	-510	-821	-995	-1,145	-1,471	-1,622	-1,033	-36.3%
Chile	58	50	46	69	57	59	87	147	193	31.7%
Total **MERCOSUR** (5)	**-763**	**-737**	**-578**	**-939**	**-1,023**	**-1,126**	**-1,388**	**-1,466**	**-768**	**-47.6%**
NAFTA										
Canada	12,709	11,967	10,585	10,751	8,906	9,751	9,659	11,475	12,556	9.4%
Mexico	-7,496	-6,104	-6,170	-8,744	-10,696	-11,800	-13,503	-13,572	-14,374	5.9%
Total **NAFTA**	**5,213**	**5,864**	**4,415**	**2,007**	**-1,790**	**-2,049**	**-3,844**	**-2,097**	**-1,818**	**-13.3%**
ALL OTHERS	**311**	**244**	**298**	**202**	**124**	**82**	**47**	**110**	**319**	**191.1%**

Source: U.S. Census Bureau
Prepared by: Office of Aerospace and Automotive Industries, U.S. Department of Commerce, 202-482-1418. 14 Feb. 2008

Notes:
*Foreign Trade Statistics, FT900: U.S. International Trade In Goods and Services, Exhibit 18: Motor Vehicles and Parts, U.S. Census Bure
1) The ASEAN region comprises Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnar
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3) The Andean Community comprises Bolivia, Colombia, Ecuador, Peru, and Venezuela
4) Central America comprises Costa Rica, El Salvador, Guatemala, Honduras, and Panama
5) The MERCOSUR countries are Argentina, Brazil, Chile, Paraguay, and Uruguay

U.S. AUTOMOTIVE PARTS EXPORTS, 1999 - 2007

Table 12

In millions of dollars

Region/Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	% Chg
WORLD	**49,901**	**53,720**	**49,794**	**50,087**	**48,501**	**52,628**	**55,054**	**58,864**	**61,954**	**5.3%**
FT900 World*	**49,601**	**54,229**	**50,133**	**49,882**	**48,383**	**52,649**	**54,662**	**58,214**	**61,221**	**5.2%**
ASIA and the PACIFIC										
Select ASEAN										
Indonesia	27	34	21	22	23	34	33	34	45	33.1%
Malaysia	58	35	26	29	27	20	21	26	28	7.5%
Philippines	55	53	29	59	88	71	110	116	117	0.9%
Singapore	150	135	143	141	142	149	157	239	256	7.2%
Thailand	127	143	85	86	96	96	97	79	110	39.6%
Total **ASEAN** (1)	**419**	**402**	**309**	**343**	**385**	**381**	**433**	**499**	**568**	**13.8%**
Chinese Economic Area										
China	251	225	258	344	510	636	623	815	1,130	38.6%
Hong Kong	114	91	82	75	75	88	82	103	100	-2.5%
Taiwan	84	79	75	77	133	111	96	124	119	-4.0%
Total **Chinese Economic Area**	**449**	**395**	**415**	**495**	**718**	**835**	**802**	**1,042**	**1,350**	**29.5%**
Select Other Asia and the Pacific										
Australia	564	700	577	615	656	768	779	875	926	5.9%
India	46	41	38	39	42	65	73	96	131	35.9%
Japan	**1,893**	**2,217**	**2,008**	**2,285**	**2,051**	**1,534**	**1,449**	**1,748**	**1,740**	**-0.5%**
Korea	597	454	369	332	309	466	562	570	593	4.0%
EUROPE										
Select European Union										
Austria	1,164	1,056	1,117	944	556	487	814	888	623	-29.9%
Belgium	348	385	348	393	383	347	297	395	411	4.1%
France	281	366	407	355	446	599	633	657	750	14.2%
Germany	950	974	1,116	941	1,019	1,256	1,379	1,591	1,586	-0.3%
Italy	112	135	158	122	140	132	130	139	157	12.4%
Netherlands	201	322	326	317	297	309	364	356	349	-2.0%
Spain	88	121	93	102	134	134	272	278	266	-4.2%
Sweden	204	143	127	154	208	241	198	198	223	12.6%
United Kingdom	1,191	1,241	1,236	1,072	1,061	994	844	872	999	14.6%
Total **European Union** (2)	**4,609**	**4,848**	**5,048**	**4,492**	**4,345**	**4,615**	**5,071**	**5,501**	**5,517**	**0.3%**
Select Other Europe										
Czech Republic	20	14	8	11	9	8	18	21	25	22.8%
Hungary	59	33	20	52	67	55	53	73	75	2.8%
Poland	23	13	14	15	17	20	33	47	61	28.0%
Russia	16	15	27	17	25	31	46	116	125	7.8%
Total **Other Europe**	**119**	**75**	**69**	**95**	**118**	**114**	**150**	**258**	**287**	**11.3%**
WESTERN HEMISPHERE										
Select Andean Community										
Colombia	70	81	76	69	68	103	108	121	130	7.5%
Peru	37	24	33	31	37	38	57	62	88	41.4%
Venezuela**	390	537	595	310	168	392	622	763	746	-2.2%
Total **Andean Community** (3)	**520**	**675**	**778**	**461**	**326**	**592**	**869**	**1,003**	**1,023**	**2.0%**
Select Central America										
Honduras	36	37	32	34	34	86	117	164	175	7.2%
Panama	32	25	18	17	15	17	20	28	42	48.2%
Total **Central America** (4)	**181**	**160**	**142**	**151**	**143**	**202**	**246**	**328**	**399**	**21.6%**
Select MERCOSUR										
Argentina	188	225	112	37	93	132	154	189	228	20.2%
Brazil**	454	401	444	454	480	565	551	601	722	20.1%
Chile	94	92	79	102	103	123	154	207	259	25.2%
Total **MERCOSUR** (5)	**767**	**736**	**647**	**598**	**685**	**830**	**872**	**1,015**	**1,234**	**21.5%**
NAFTA										
Canada	29,643	29,601	26,372	27,968	27,474	29,914	31,239	31,900	32,665	2.4%
Mexico*	9,271	12,559	12,010	11,326	10,343	11,304	11,407	12,796	13,896	8.6%
Total **NAFTA**	**38,915**	**42,161**	**38,381**	**39,293**	**37,817**	**41,219**	**42,646**	**44,695**	**46,561**	**4.2%**
ALL OTHERS	**823**	**858**	**1,012**	**887**	**907**	**1,009**	**1,103**	**1,234**	**1,627**	**31.9%**

Exports, f.a.s.
Source: U.S. Census Bureau
Prepared by: Office of Aerospace and Automotive Industries, U.S. Department of Commerce, 202-482-1418. 14 Feb. 2008

Notes:
*Foreign Trade Statistics, FT900: U.S. International Trade in Goods and Services, Exhibit 18: Motor Vehicles and Parts, U.S. Census Bure
**1998 and 1999 data include transshipments to Brazil and Venezuela through St. Vincent and Grenadines
1) The ASEAN region comrpises Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietna
2) The selected European Union countries are Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, the Unite Kingdom, Austria, Finland, and Sweden
3) The Andean Community comprises Bolivia, Colombia, Ecuador, Peru, and Venezuela
4) Central America comprises Costa Rica, El Salvador, Guatemala, Honduras, and Panama
5) The MERCOSUR countries are Argentina, Brazil, Chile, Paraguay, and Uruguay

*1995 data revised to reflect $698 million in exports underreported by Census

U.S. AUTOMOTIVE PARTS IMPORTS, 1999 - 2007

Table 13

In millions of dollars

Region/Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	% Chg
WORLD	**61,619**	**66,959**	**62,726**	**69,089**	**74,469**	**83,444**	**92,154**	**95,179**	**98,772**	**3.8%**
FT900 World	**64,144**	**69,309**	**64,852**	**69,998**	**74,087**	**82,694**	**90,831**	**94,002**	**88,607**	**-5.7%**
ASIA and the PACIFIC										
Select ASEAN										
Indonesia	264	269	282	320	298	362	396	490	570	16.2%
Malaysia	275	286	244	263	255	274	229	203	304	50.1%
Philippines	324	408	360	349	386	399	441	517	587	13.7%
Singapore	178	156	147	134	100	106	104	97	92	-5.1%
Thailand	421	415	411	546	529	582	660	892	1,139	27.6%
Total **ASEAN** (1)	**1,462**	**1,535**	**1,444**	**1,619**	**1,586**	**1,747**	**1,860**	**2,264**	**2,820**	**24.5%**
Chinese Economic Area										
China	1,284	1,635	1,758	2,242	2,788	3,884	5,408	6,928	8,525	23.1%
Hong Kong	61	57	41	51	80	89	102	121	78	-35.8%
Taiwan	1,062	1,033	1,085	1,294	1,366	1,604	1,731	1,801	1,934	7.4%
Total **Chinese Economic Area**	**2,407**	**2,725**	**2,885**	**3,587**	**4,234**	**5,577**	**7,240**	**8,850**	**10,537**	**19.1%**
Select Other Asia and the Pacific										
Australia	248	251	186	198	205	220	227	192	198	2.9%
India	161	190	179	202	234	333	463	578	658	14.0%
Japan	**12,775**	**14,535**	**13,150**	**13,498**	**13,745**	**15,494**	**16,448**	**15,377**	**14,222**	**-7.5%**
Korea	919	1,082	1,122	1,383	1,546	1,866	2,709	3,736	3,931	5.2%
EUROPE										
Select European Union										
Austria	211	230	201	222	281	240	373	358	531	48.4%
Belgium	90	97	82	89	100	95	134	168	168	-0.1%
France	1,303	1,133	1,165	1,197	1,302	1,478	1,449	1,320	1,253	-5.1%
Germany	3,451	3,874	3,746	4,336	5,426	6,147	6,709	7,132	8,289	16.2%
Italy	447	474	525	652	751	874	958	844	955	13.2%
Netherlands	60	60	66	71	70	81	86	95	110	16.6%
Spain	346	301	269	349	420	464	537	546	477	-12.6%
Sweden	292	241	188	212	229	345	446	551	255	-53.6%
United Kingdom	1,118	1,190	976	1,106	1,068	1,045	1,126	1,047	949	-9.3%
Total **European Union** (2)	**7,451**	**7,716**	**7,375**	**8,425**	**9,858**	**11,009**	**12,099**	**12,339**	**13,218**	**7.1%**
Select Other Europe										
Czech Republic	53	60	86	125	150	156	236	238	333	39.6%
Hungary	95	97	100	180	315	219	213	225	201	-10.7%
Poland	19	42	43	57	95	103	97	109	135	23.9%
Russia	4	4	2	2	3	5	4	4	11	197.8%
Total **Other Europe**	**172**	**203**	**230**	**364**	**564**	**483**	**550**	**576**	**679**	**17.9%**
WESTERN HEMISPHERE										
Select Andean Community										
Colombia	7	8	10	13	16	14	19	26	25	-1.4%
Peru	5	4	10	12	8	12	9	13	9	-26.4%
Venezuela	207	235	159	172	191	190	211	196	80	-59.1%
Total **Andean Community** (3)	**219**	**249**	**179**	**199**	**216**	**217**	**240**	**236**	**117**	**-50.6%**
Select Central America										
Honduras	41	70	52	75	99	173	270	385	395	2.5%
Panama	1	1	0	1	0	2	0	1	0	-84.8%
Total Central America (4)	**61**	**91**	**69**	**105**	**181**	**345**	**510**	**633**	**704**	**11.3%**
Select MERCOSUR										
Argentina	131	177	233	223	185	178	168	187	172	-8.0%
Brazil	1,360	1,248	955	1,275	1,474	1,711	2,022	2,224	1,755	-21.1%
Chile	36	42	33	33	46	64	66	60	65	9.1%
Total **MERCOSUR** (5)	**1,529**	**1,473**	**1,225**	**1,538**	**1,708**	**1,956**	**2,261**	**2,481**	**2,002**	**-19.3%**
NAFTA										
Canada	16,934	17,634	15,787	17,217	18,569	20,164	21,581	20,424	20,108	-1.5%
Mexico	16,768	18,663	18,180	20,069	21,039	23,104	24,910	26,368	28,270	7.2%
Total **NAFTA**	**33,702**	**36,297**	**33,967**	**37,286**	**39,607**	**43,268**	**46,490**	**46,792**	**48,379**	**3.4%**
ALL OTHERS	**512**	**613**	**714**	**686**	**783**	**927**	**1,056**	**1,124**	**1,309**	**16.4%**

Imports, customs value
Source: U.S. Census Bureau
Prepared by: Office of Aerospace and Automotive Industries, U.S. Department of Commerce, 202-482-1418. 14 Feb. 2008

Notes:
*Foreign Trade Statistics, FT900: U.S. International Trade In Goods and Services, Exhibit 18: Motor Vehicles and Parts, U.S. Census Bure
1) The ASEAN region comprises Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnar
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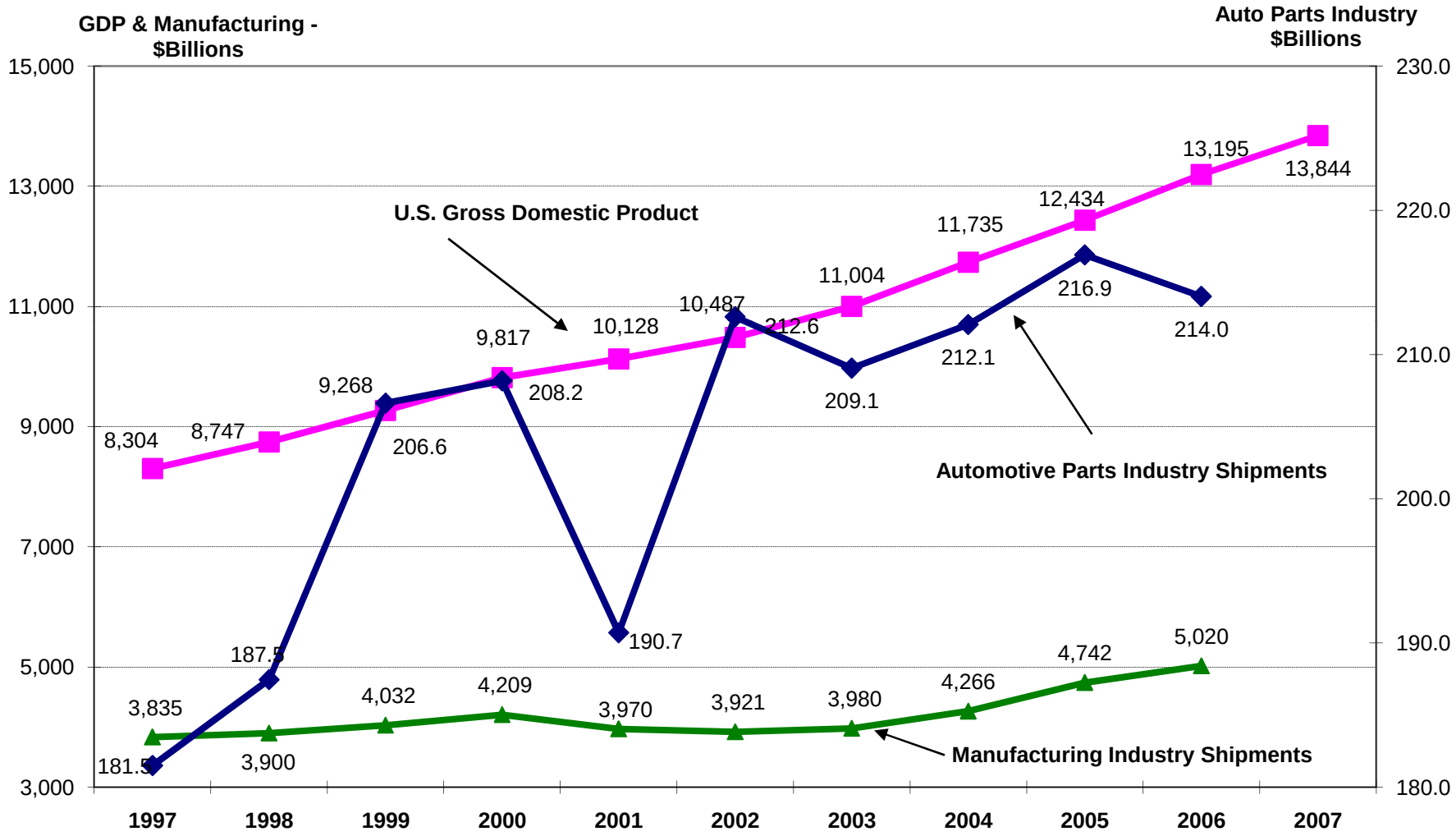
3) The Andean Community comprises Bolivia, Colombia, Ecuador, Peru, and Venezuela
4) Central America comprises Costa Rica, El Salvador, Guatemala, Honduras, and Panama
5) The MERCOSUR countries are Argentina, Brazil, Chile, Paraguay, and Uruguay

Chart 1

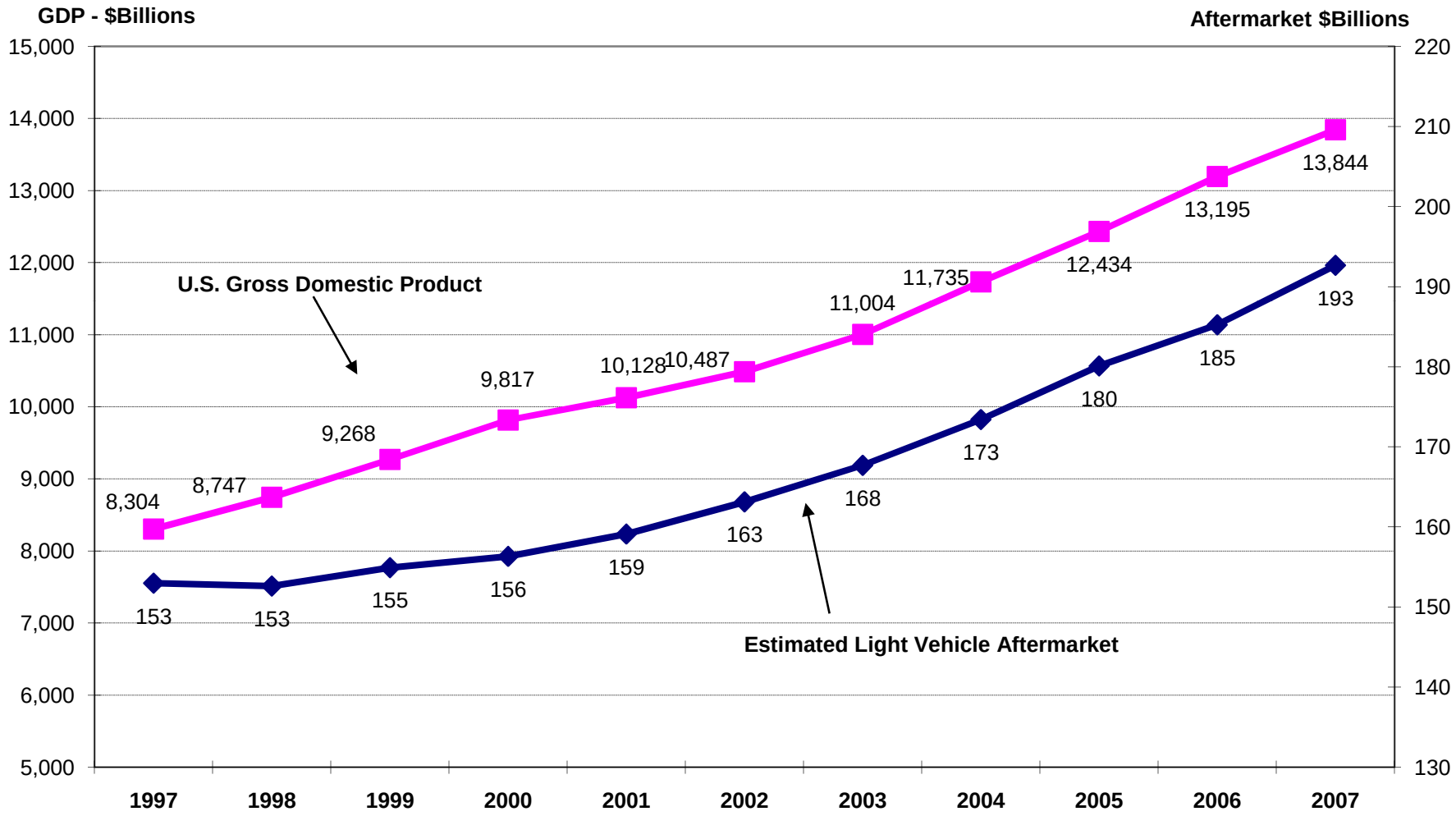
Gross Domestic Product, Manufacturing Industry Shipments, and Automotive Parts Industry Shipments, 1997-2007.



Source: U.S. Department of Commerce.

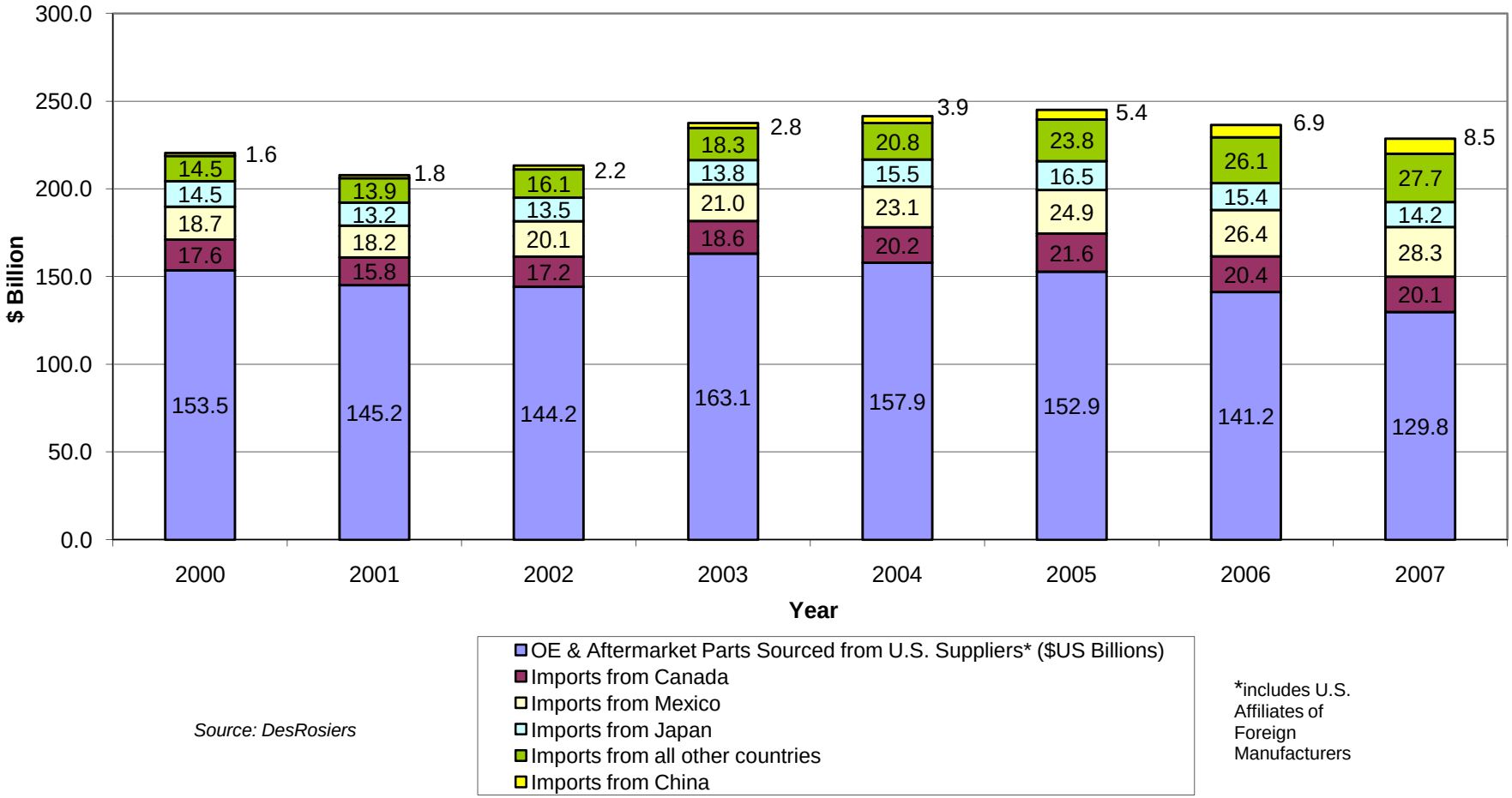
Chart 2

Aftermarket sales track the economy. The aftermarket accounted for 1.7% of the 1997 GDP and an estimated 1.4% in 2007.



Source: U.S. Department of Commerce and Motor and Equipment Manufacturers Association aftermarket model.

Chart 3
U.S. OE and Aftermarket Parts Market, 2000-2007
The U.S. Supplier Share has been declining since 2003.

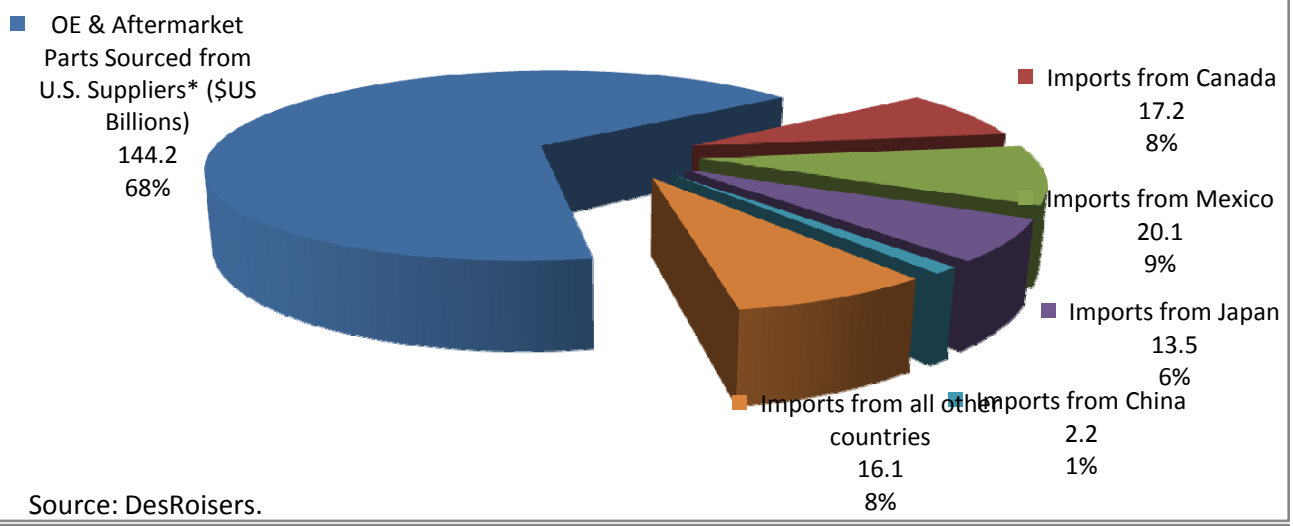


Source: DesRosiers

*includes U.S. Affiliates of Foreign Manufacturers

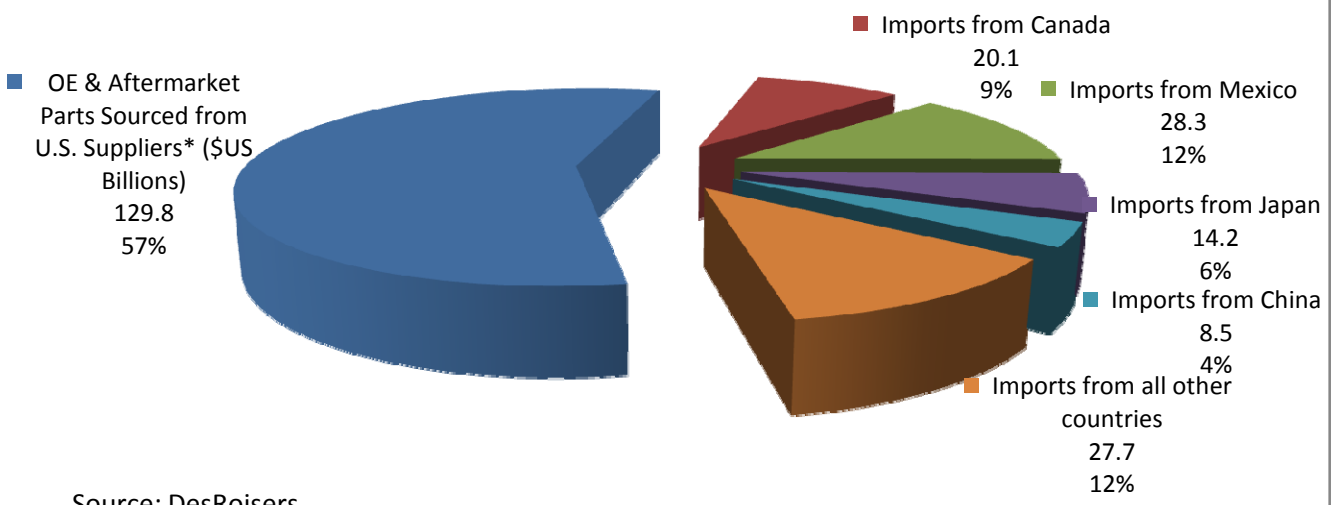
Chart 4

OE and Aftermarket Parts Imports to the United States, 2002.
OE and Aftermarket parts sourced from U.S. suppliers had 68 percent of market share in 2002



Source: DesRoisers.

OE and Aftermarket Parts Imports to the United States, 2007.
OE and Aftermarket parts sourced from U.S. suppliers fell to 57 percent of market share in 2007

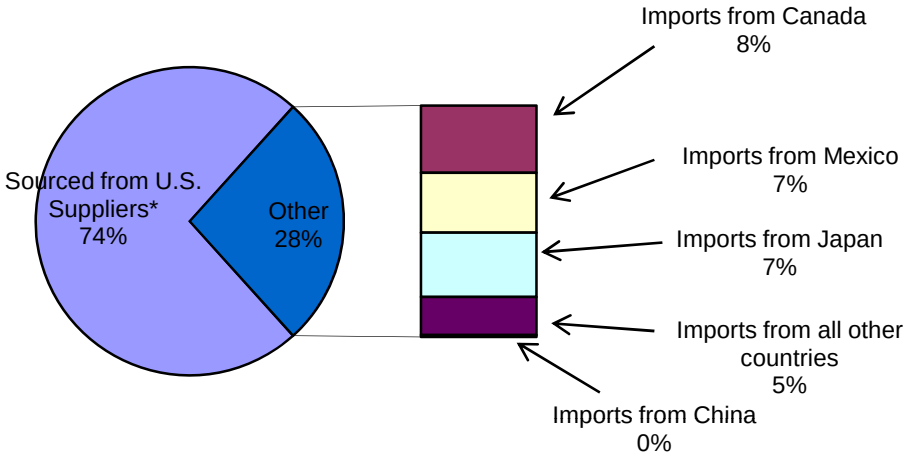


Source: DesRoisers.

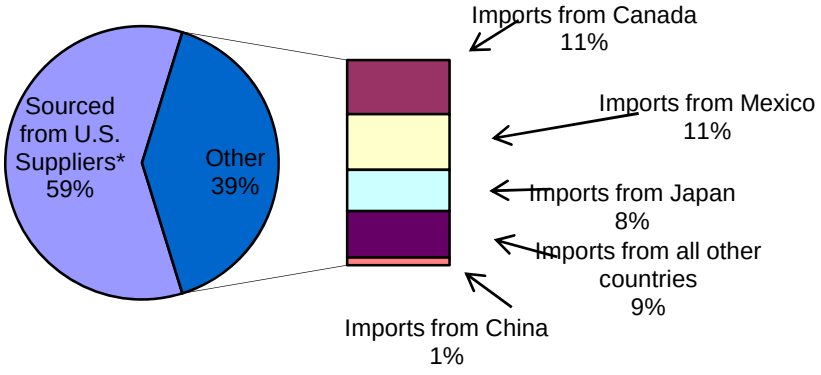
Chart 5

U.S. Original Equipment Parts Market, 1997 and 2004

OE Parts Market 1997
Total: $147.7 Billion



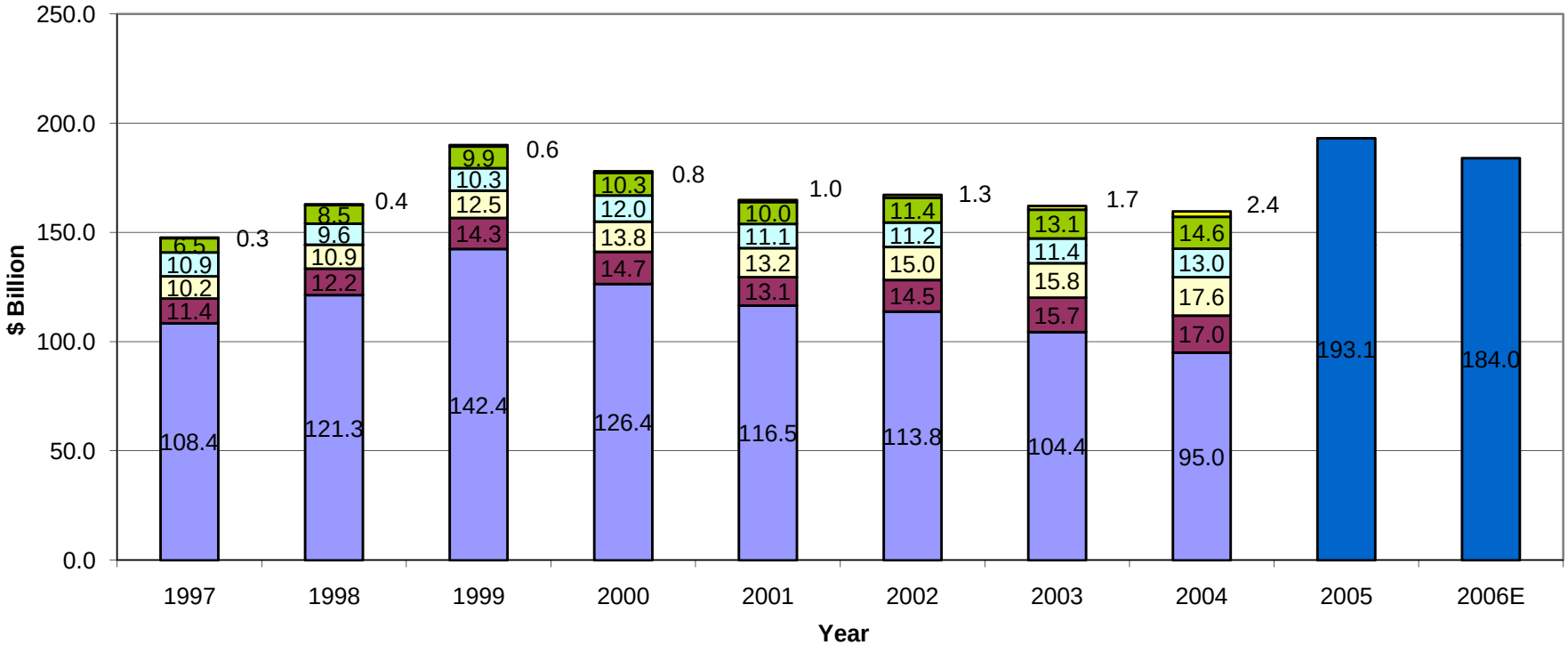
U.S. OE Market 2004
Total: $159.6 Billion



*U.S. suppliers include U.S. affiliates of foreign suppliers

Source: DesRosiers and Automotive News.

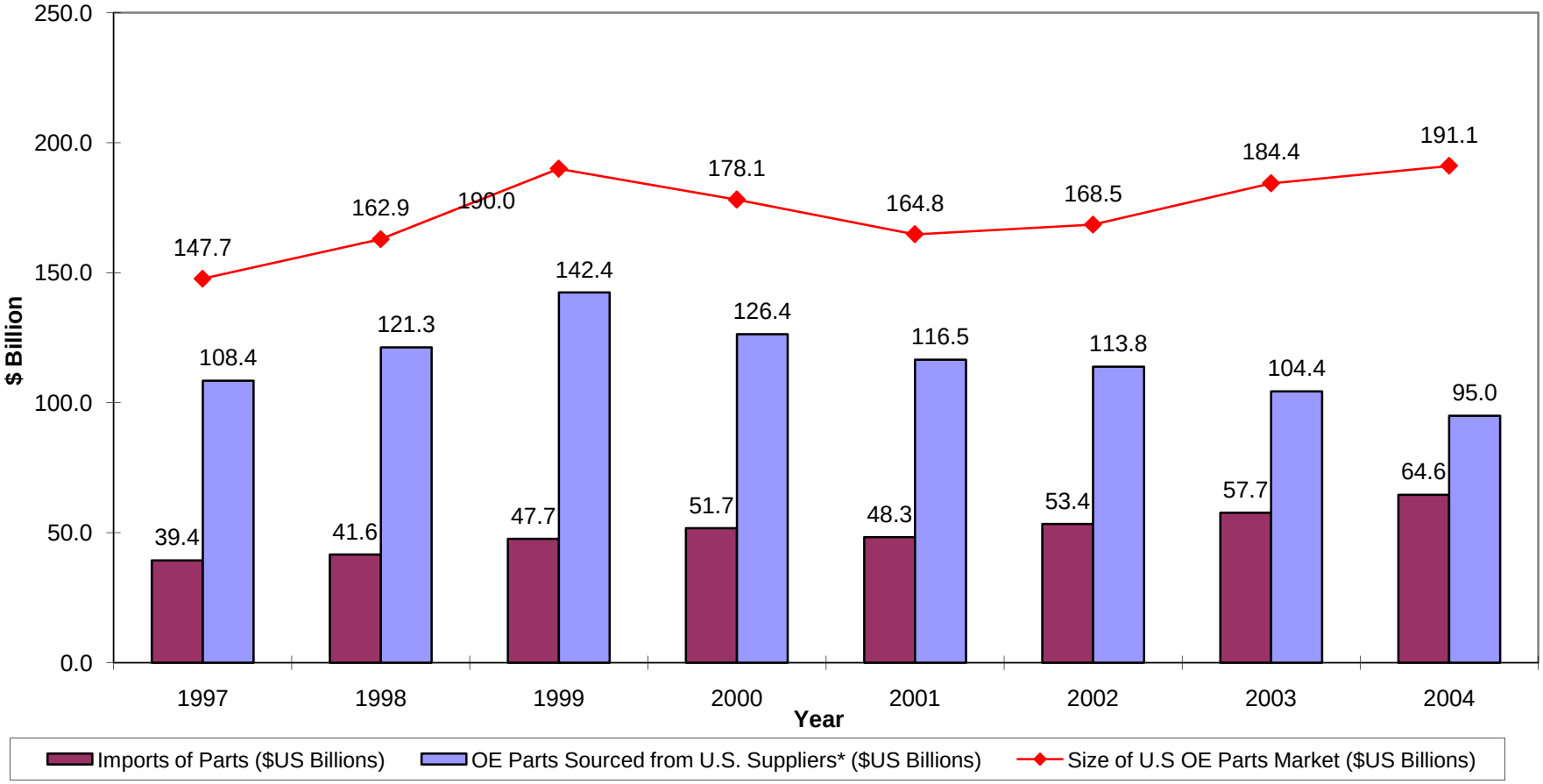
Chart 6
U.S. OE Parts Market, 1997-2006
The U.S. OE Parts market high point was $193 Billion in 2005.



*includes U.S. Affiliates of Foreign Manufacturers

Source: DesRosiers and Automotive News.

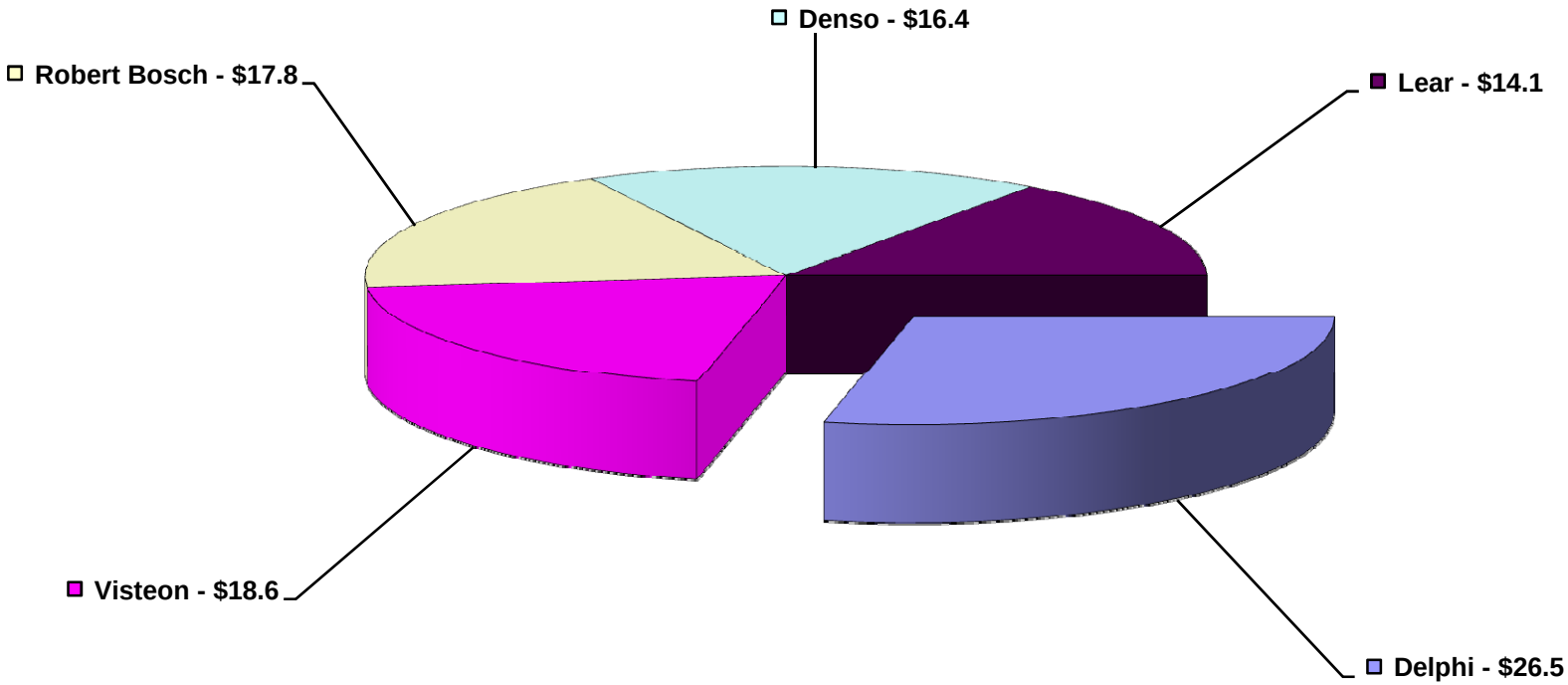
Chart 7
U.S. OE Parts Market, 1997-2006
U.S. sourced* parts declined from 74 percent of the market in 1997
to 59 percent of market in 2004.



Source: DesRosiers and Automotive News. *Includes U.S. Affiliates of Foreign Manufacturers.

Chart 8

In 2000, the top 5 global suppliers of original equipment parts had sales of $93.3 billion. Delphi's share was 28% and Robert Bosch's share was 19%.

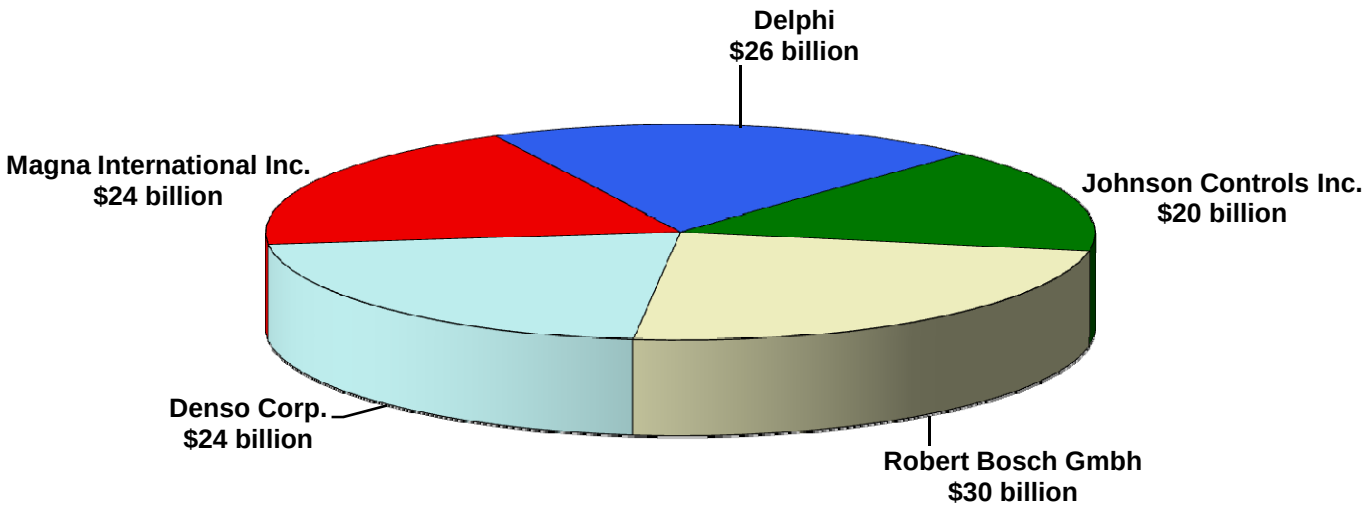


Source: Automotive News

Source: *Automotive News*

Chart 9

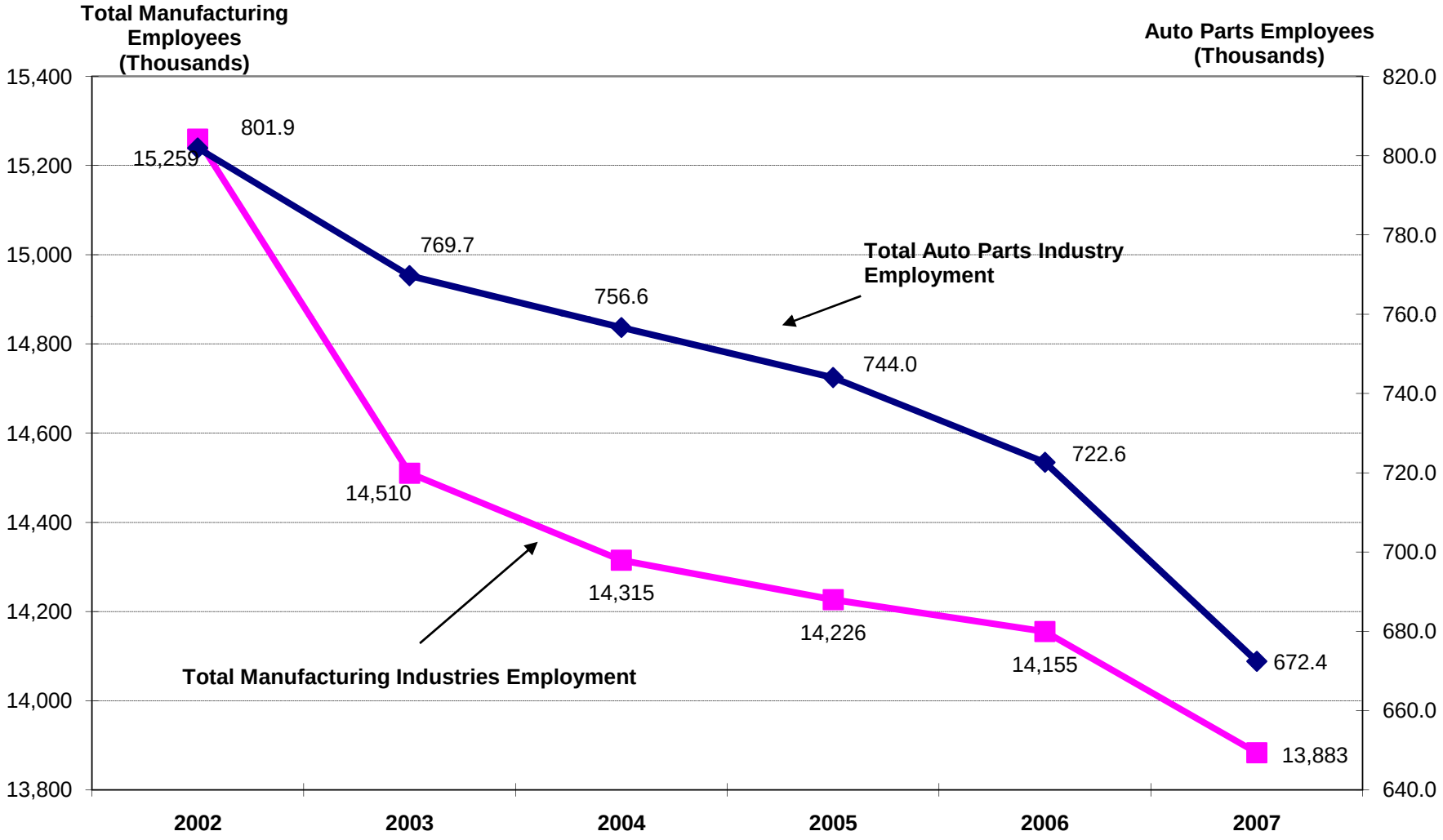
In 2006, the top 5 global OE suppliers had $123 billon in sales.



Source: Automotive News

Chart 10

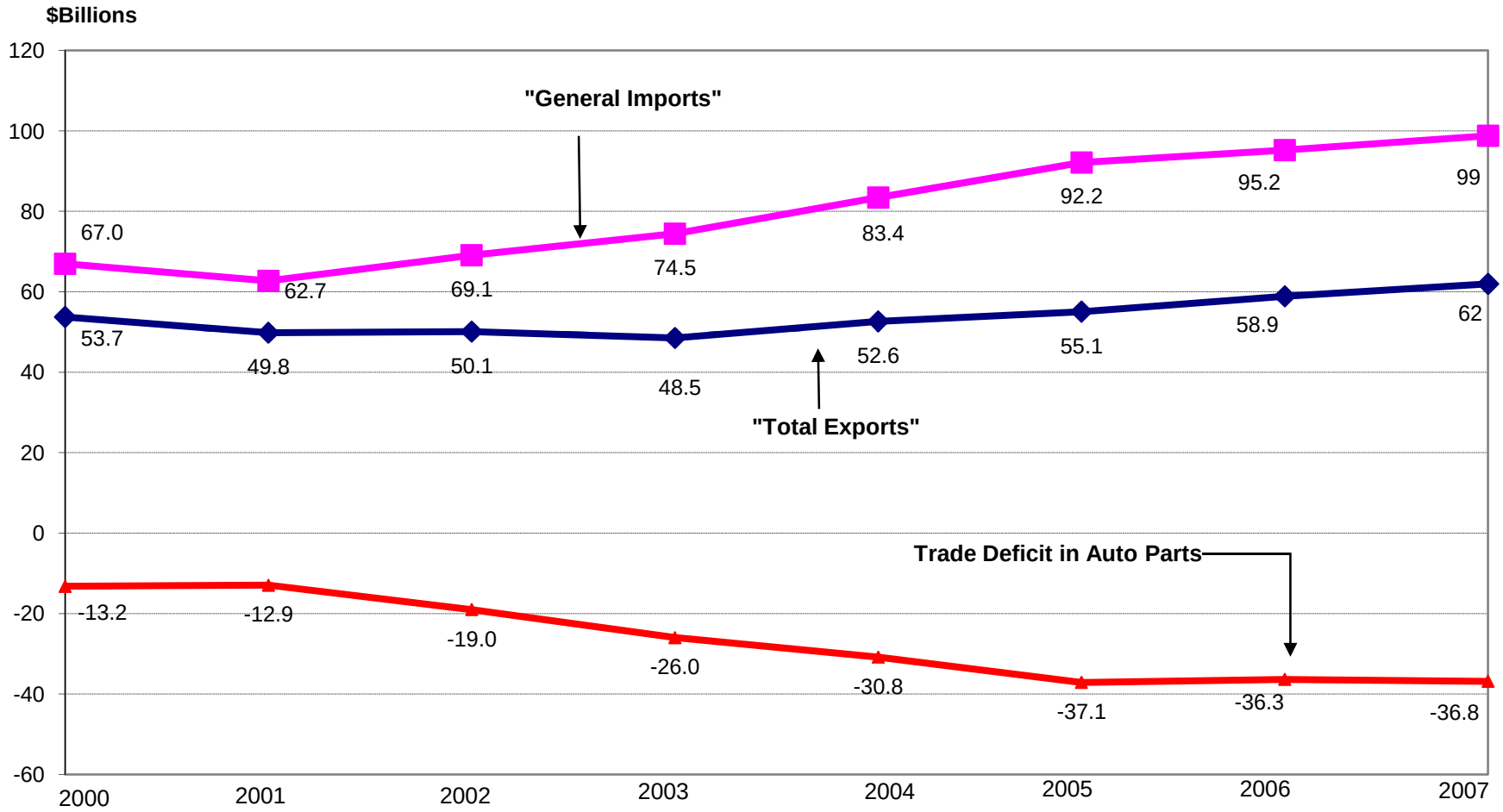
Employment in the U.S. auto parts industry has consistantly been between 5.1 percent and 5.3 percent of the total manufacturing employment.



Source: U.S. Bureau of the Census. and U.S. Bureau of Labor Statistics.

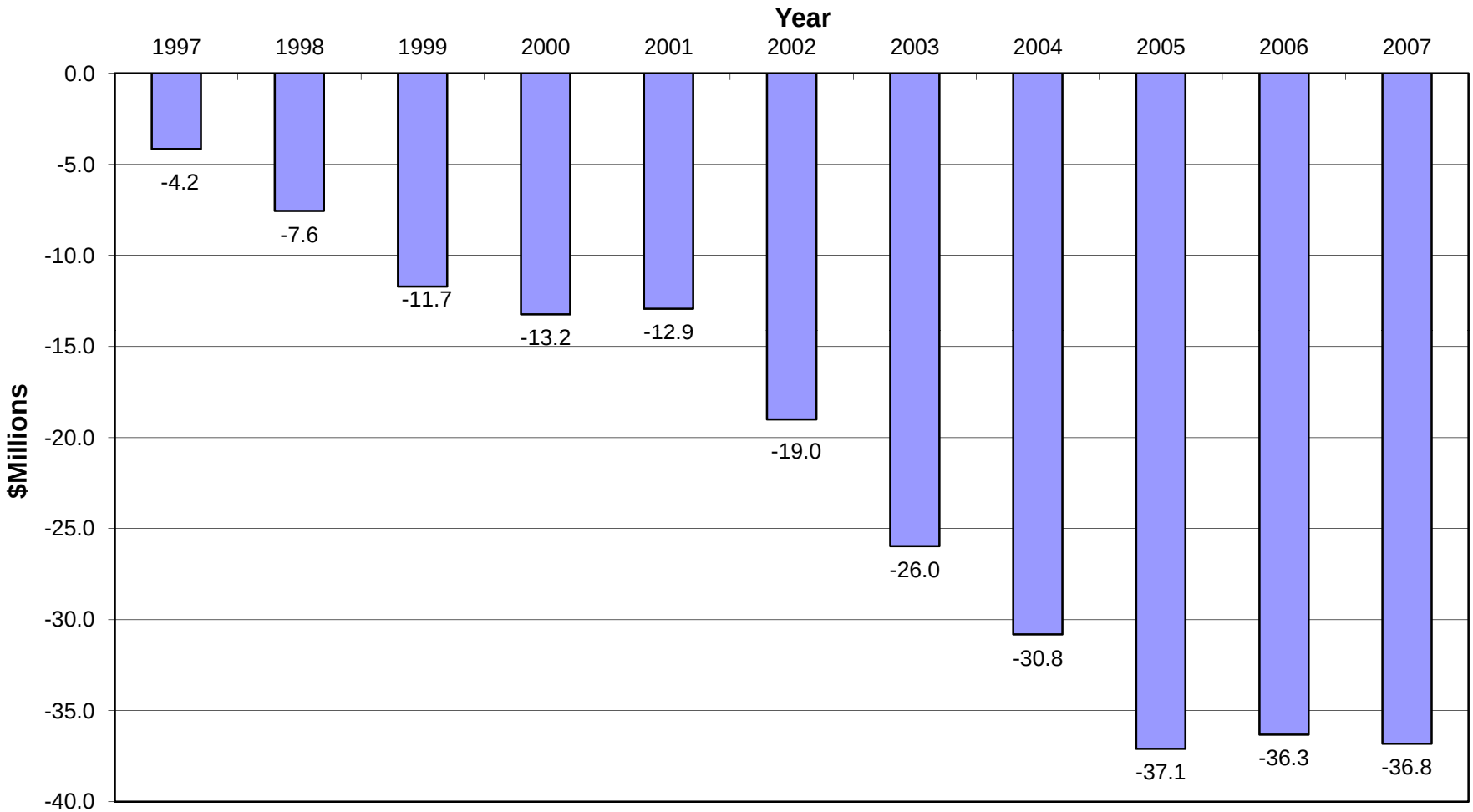
Chart 11

U.S. auto parts exports grew 5.3 % in 2007 and imports increased 3.8%. The result was a slight decline of the parts trade deficit with the world by 1.4 percent.



Source: U.S. Bureau of the Census, U.S. Department of Commerce.

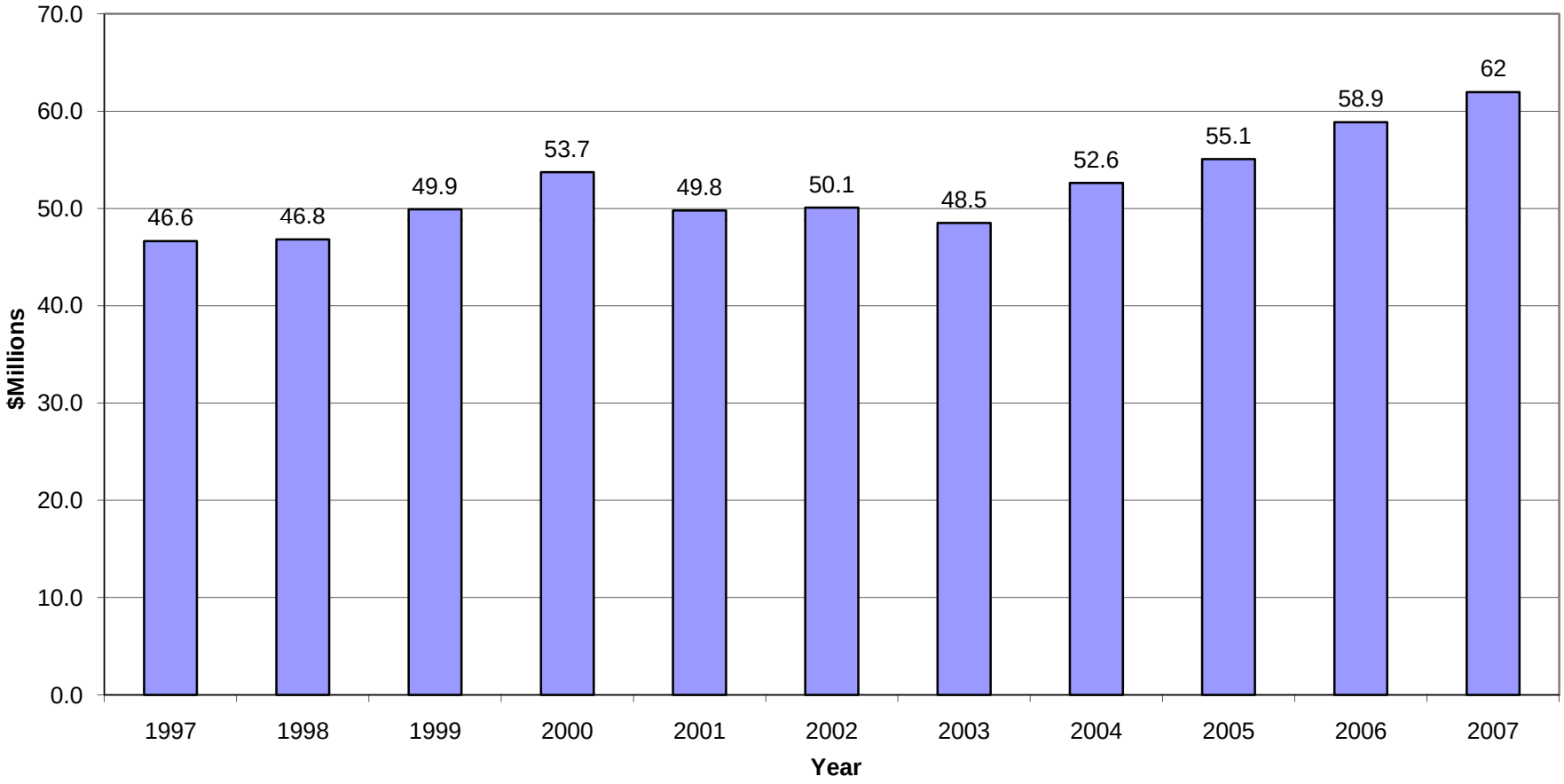
Chart 12
resulting in a 1.4 increase in U.S. automotive parts trade deficit.
U.S. Automotive Parts Trade Balance, 1997-2006



Source: U.S. Department of Commerce, Bureau of the Census.

Chart 13
Exports increased 5.3 percent in 2007 over 2006...

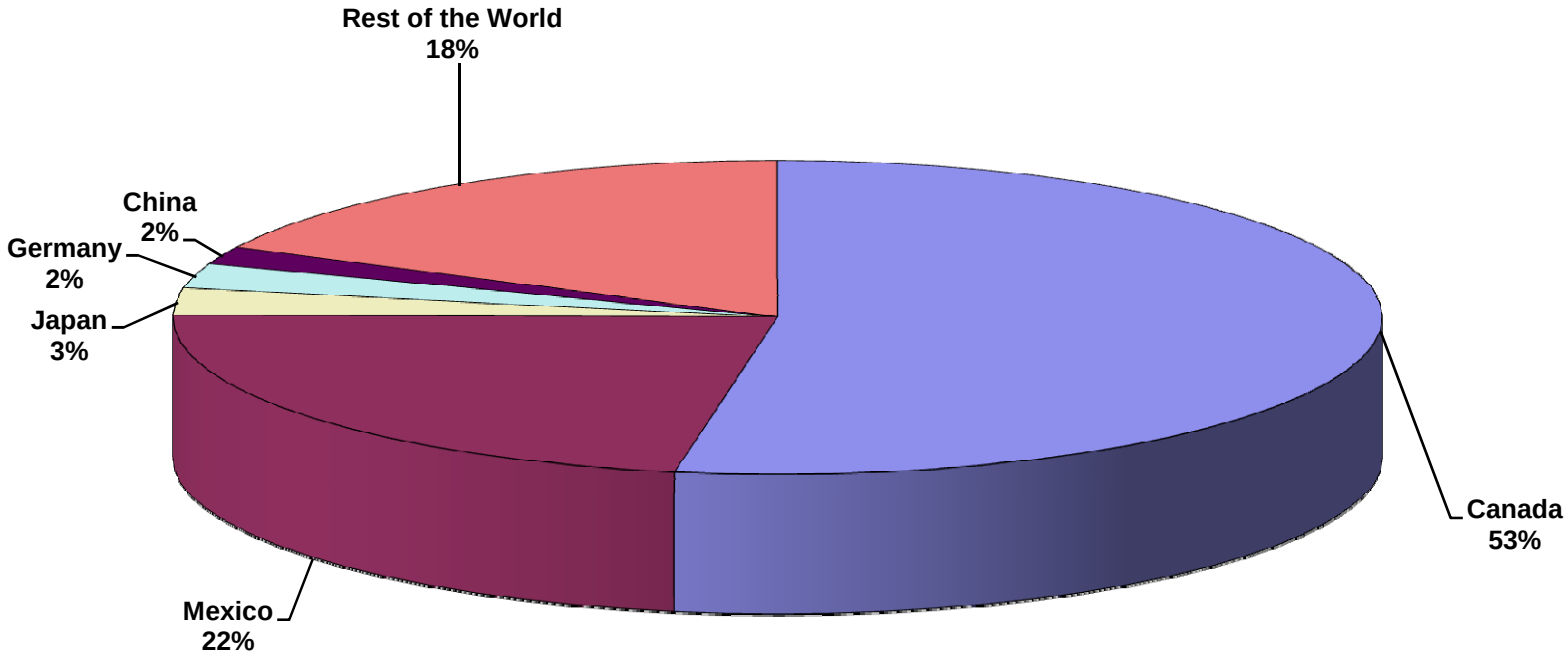
U.S. Automotive Parts Exports, 1997-2007



Source: U.S. Department of Commerce, Bureau of the Census.

Chart 14

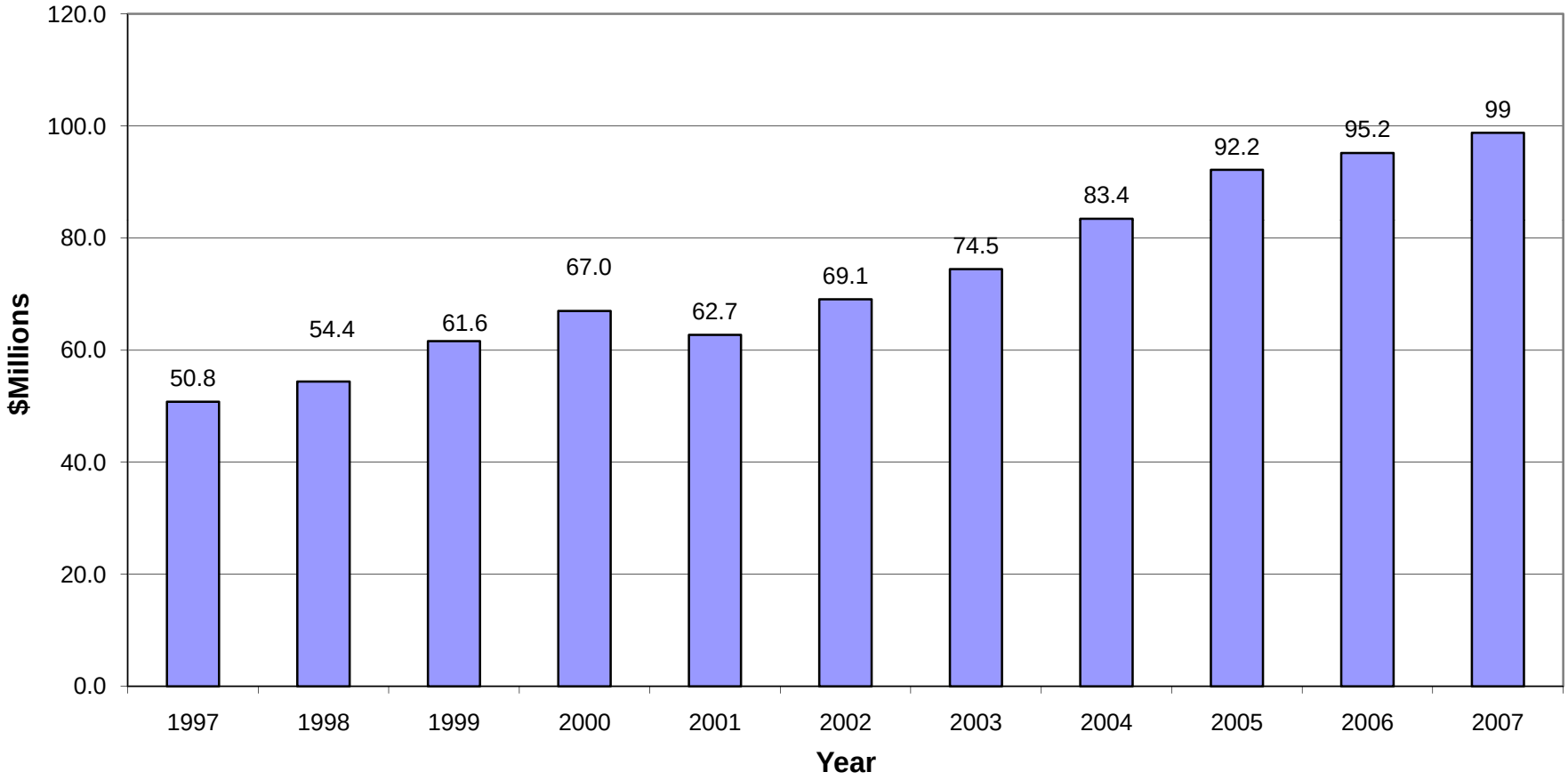
In 2006, parts shipments to Canada accounted for 53 % of U.S. parts exports.
Total: $62 billion



Source: U.S. Bureau of the Census

Chart 15
while Imports increased 3.8 percent in 2007,

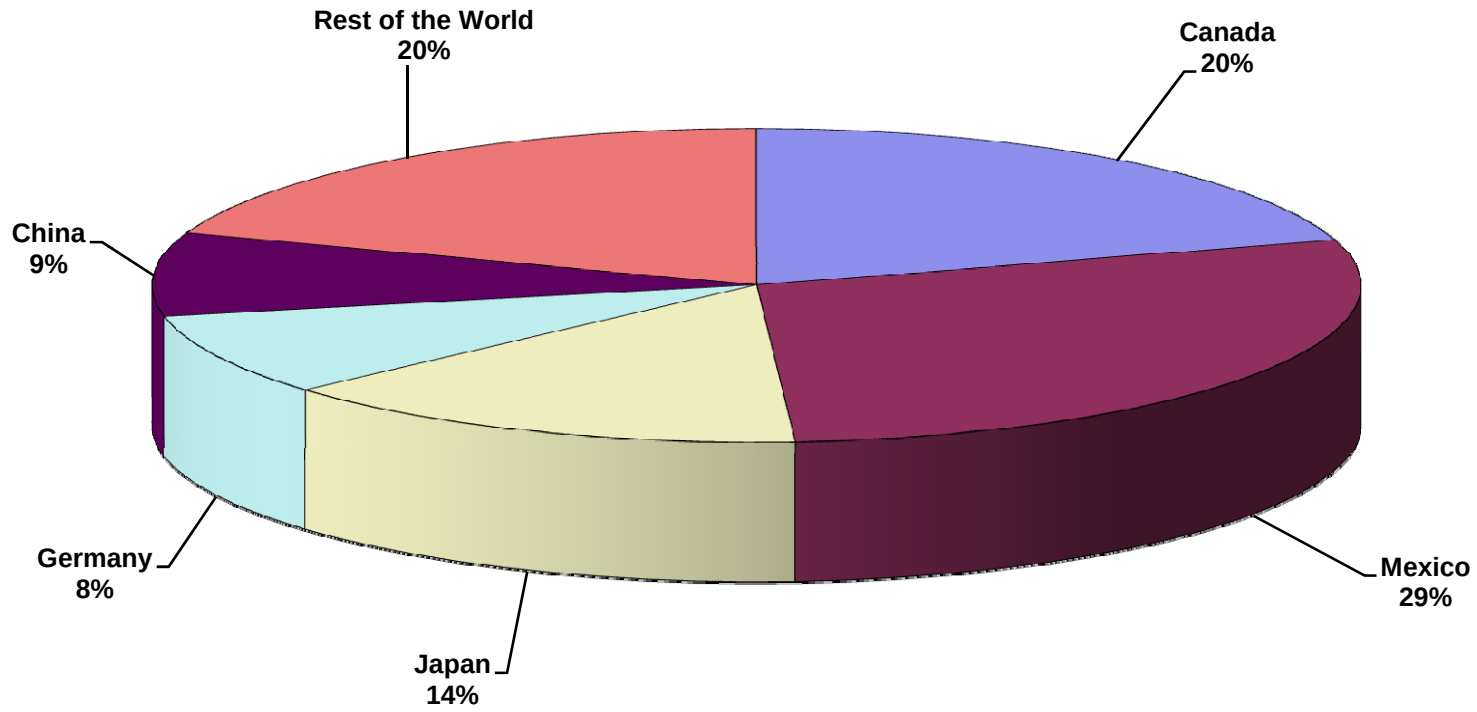
U.S. Automotive Parts Imports, 1997-2007



Source: U.S. Department of Commerce, Bureau of the Census.

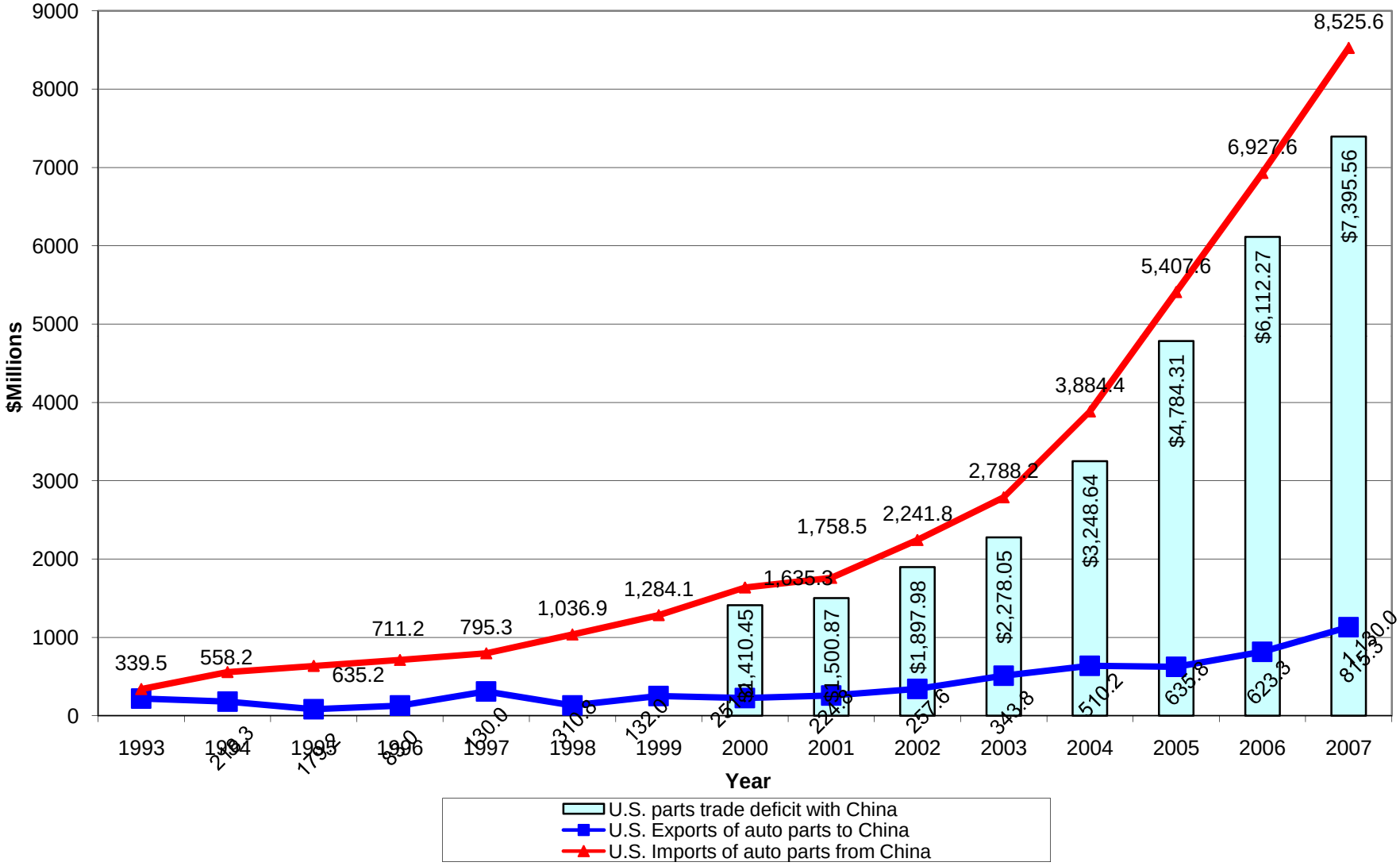
Chart 16

In 2007, Canada and Mexico accounted for 49 % of U.S. parts imports.
Total: $98.8 billion



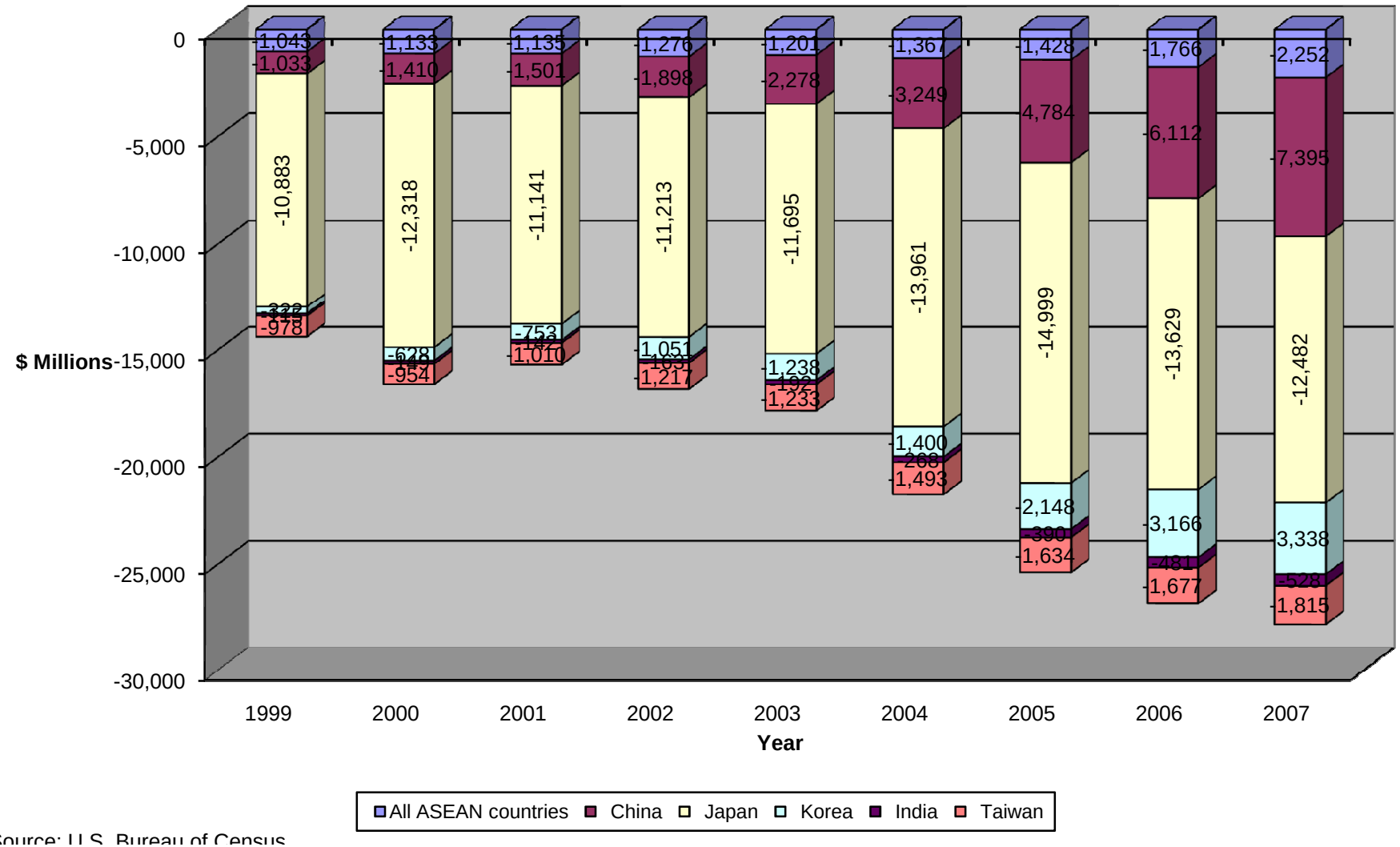
Source: U.S. Bureau of the Census

Chart 17
U.S. - China Auto Parts Trade, 1993-2007
In 2006, the parts trade deficit with China increased 28 percent over 2005 levels



Source: U.S. Department of Commerce, Bureau of the Census.

Chart 18
The U.S. auto parts trade deficit with Asian countries continues to increase.



Source: U.S. Bureau of Census