

28th  
EDITION

2019

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# DIGITAL AUTO CARE factbook



**The Source for  
Auto Care Industry  
Information**

Welcome to the 28<sup>th</sup> edition of the *Auto Care Factbook*. The Auto Care Association is pleased to again provide this cost-effective and environmentally responsible publication in digital format.

This edition of the *Auto Care Factbook* highlights many upward trends we are seeing in today's \$392B auto care industry: increasing consumer confidence and spending (even with higher gas prices); CAGR sustaining its upswing; rising average hourly wages; and more than 50,000 new industry jobs added in the past year. At the same time, our members are paying close attention to the impacts of telematics and access to data, the average age of vehicles and the health of the economy in general. Your *Factbook* takes a deep dive into these topics and many more, providing all of the information you need to keep thriving in our dynamic aftermarket -- which is projected to be a \$433B industry in 2021.

Your *Auto Care Factbook 2019* once again is providing this data and analysis through interactive and enhanced online features.

In this 28<sup>th</sup> edition, you will find:

- Updated "Key Economic Indicators 2014–2018" by Northwood University (p. 2),
- The latest trends on Supply, Demand and CAGRs for Technician Employment (p. 5),
- An extended Industry Forecast through 2021 by IHS Markit (p.10–14),
- Updated Program and Retail Distribution Summaries (p. 18–19),
- An updated "Global Automotive Aftermarket Review" by Jefferies (p. 21–40),
- Updated Consumer Profiles for DIY-DIFM demographics, IMR Insights on millennial light maintenance DIYers, Reasons Why consumers choose DIY and DIFM outlets, DIY Propensity and shop averages, Replacement Rates, and Delayed Maintenance (p. 41–50)
- Updated U.S. New and Total Vehicle Registrations by IHS Markit (p. 59–64),
- An updated Hybrid Vehicles Summary and Vehicle Operating Costs (p. 65–72),
- Updated "U.S. and Global Aftermarket Dynamics" by Northwood University (p. 80–81),
- Updated Global Registration summary by IHS Markit (p. 83–87),
- An update on the Canadian Automotive Aftermarket recap by DesRosiers (p. 93–95),

This digital publication allows you to:

- Turn pages with the click of a mouse.
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- Access resources and websites through live embedded hyperlinks.
- Quickly locate what you are looking for through a "word search" feature.
- Download Excel-based files, charts, tables and graphs.
- Save material for future reference through the "bookmarks" feature.

Thank you for celebrating our 28<sup>th</sup> anniversary with us. We look forward to many more years of providing what you need to run your business with the industry's must-have flagship publication, the *Auto Care Factbook*.



Bill Hanvey  
President & CEO

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The Auto Care Association is a Bethesda, Md.-based association that has more than 3,000 member companies representing approximately 150,000 independent businesses that manufacture, distribute and sell motor vehicle parts, accessories, tools, equipment, materials and supplies, and perform vehicle service and repair.

# Auto Care Association Market Intelligence Program

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The Auto Care Association Market Intelligence Program, which is responsible for the production of all Auto Care Association research, has four full-time professional staff members and an oversight committee of volunteers from the membership.

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# Economic Indicators

in this section

## **Key Economic Indicators**

Macroeconomics and the Auto Care Industry

## **National Debt**

U.S. National Debt

## **Industry Employment**

Employment data for all levels of the Auto Care Industry, from manufacturing to retail and service

## **Technician Employment and Wages**

Employment and wage data for the professional service sector of the Auto Care Industry

## **What Do Our Members Think?**

Key Issues Impact Survey Results, Business Confidence Index and the Economic Confidence Index with monthly tracking

# Key Economic Indicators

U.S. current gross domestic product should total \$19.8 trillion in 2018 complimenting a 3.62 percent compounded annual growth rate (CAGR) from 2014 – 2017. U.S. real domestic product is expected to total \$17.5 trillion in 2018 reflecting a 2.21 percent CAGR during the 2014 – 2017 period. Since the economic recovery began in 2009, the U.S. economy has realized favorable changes in key economic data as noted in the chart below. Some of the most notable changes in the 3-year compounded growth rates occurred in motor vehicle parts manufacturing (3.9 percent), retail sales (3.04 percent) and disposable income (3.33 percent).

Just like last year's report, the U.S. dollar in 2017 has increased favorably against most of the major currencies and is expected to remain strong in 2018. The U.S. national debt continues to grow in real and nominal terms presenting a burden to the U.S. taxpayers and hinders economic growth. A strengthening U.S. dollar in the second half of 2017 and into 2018 reduces the cost of foreign imports ranging from oil and steel to minerals and automobiles. However, a more valuable U.S. dollar means that many U.S. exports will cost more to purchase. From its Great Recession low of below 50 in 2009, consumer confidence reached 123.1 in December 2017 and is expected to continue trending upward in 2018 to 129.

*This summary was prepared by Dr. Timothy G. Nash, Vice President and Director of the McNair Center at Northwood University.*

## Key Economic Indicators (Billions of chained 2009 Dollars adjusted for inflation, unless otherwise noted)

|  | 2014       | 2015       | 2016       | 2017       | 2018 Estimate | CAGR (2014-2017) | Assessment |
|--|------------|------------|------------|------------|---------------|------------------|------------|
| <b>Gross Domestic Product and Components</b>               |            |            |            |            |               |                  |            |
| Gross Domestic Product (GDP); Nominal                      | \$17,427.6 | \$18,120.7 | \$18,624.5 | \$19,390.6 | \$19,875.4    | 3.62%            | ◆          |
| Gross Domestic Product (GDP); Real                         | \$16,013.3 | \$16,471.5 | \$16,716.2 | \$17,096.2 | \$17,523.6    | 2.21%            | ◆          |
| Inflation Rate   | 0.8%       | 0.7%       | 2.1%       | 2.1%       | 2.4%          | 1.63%            | ◆          |
| U.S. National Debt (Nominal)                               | \$18,141.4 | \$18,922.2 | \$19,976.8 | \$20,492.7 | \$21,664.0    | 4.15%            | ◇          |
| U.S. National Debt as a Percent of GDP                     | 104.1%     | 104.4%     | 107.3%     | 105.7%     | 106.0%        | 0.51%            | ◇          |
| Personal Consumption Expenditures                          | \$11,863.7 | \$12,332.3 | \$12,820.7 | \$13,395.5 | \$13,917.4    | 4.13%            | ◆          |
| Durable Goods  | \$1,296.4  | \$1,367.1  | \$1,411.0  | \$1,473.8  | \$1,676.0     | 4.37%            | ◆          |
| Nondurable Goods   | \$2,674.1  | \$2,666.0  | \$2,710.4  | \$2,821.5  | \$2,931.20    | 1.80%            | ◆          |
| Services   | \$7,893.2  | \$8,299.1  | \$8,699.3  | \$9,100.2  | \$9,310.20    | 4.86%            | ◆          |
| Gross Private Domestic Investment                          | \$2,817.3  | \$2,879.2  | \$2,905.7  | \$3,011.1  | \$3,124.4     | 2.24%            | ◆          |
| Government Expenditures (Billions of Current Dollars)      | \$3,968.6  | \$4,061.5  | \$4,210.1  | \$4,354.8  | \$4,417.0     | 3.14%            | ◇          |
| Trade Balance  | -\$490.3   | -\$500.4   | -\$504.8   | -\$568.4   | -\$514.5      | 5.05%            | ◇          |
| Total Exports  | \$2,375.9  | \$2,263.9  | \$2,208.1  | \$2,331.6  | \$2,401.5     | -0.63%           | ◆          |
| Total Imports  | \$2,866.2  | \$2,764.4  | \$2,712.9  | \$2,900.0  | \$2,916.0     | 0.39%            | ◇          |
| <b>Interest Rates (Change in points) <sup>1</sup></b>      |            |            |            |            |               |                  |            |
| Prime Rate   | 3.25%      | 3.26%      | 3.51%      | 4.50%      | 5.00%         | 11.46%           | ◆          |
| Federal Funds Rate   | 0.09%      | 0.13%      | 0.39%      | 1.00%      | 1.25%         | 123.14%          | ◆          |
| <b>Manufacturing Indicators</b>                            |            |            |            |            |               |                  |            |
| Industrial Production Indexes (2002 = 100) <sup>1</sup>    |            |            |            |            |               |                  |            |
| Motor Vehicle Parts Manufacturing (average)                | 114.4      | 124.8      | 128.3      | 128.3      | 128.4         | 3.90%            | ◆          |
| Tire Manufacturing (average, 2012 = 100)                   | 95.5       | 96.7       | 90.0       | 87.9       | 87.5          | -2.71%           | ◆          |
| Purchasing Managers Index (average) <sup>2</sup>           | 55.6       | 51.4       | 51.5       | 57.5       | 58.0          | 1.15%            | ◆          |
| <b>Consumer Information</b>                                |            |            |            |            |               |                  |            |
| Retail Sales (Billions of Current Dollars) <sup>3</sup>    | \$4,639    | \$4,727    | \$4,863    | \$5,075    | \$5,325       | 3.04%            | ◆          |
| Disposable Personal Income (Billions of Current Dollars)   | \$13,032.6 | \$13,615.0 | \$13,968.6 | \$14,379.0 | \$14,844.0    | 3.33%            | ◆          |
| Civilian Unemployment Rate (Change in points) <sup>4</sup> | 6.2%       | 5.3%       | 4.9%       | 4.4%       | 4.1%          | -10.80%          | ◆          |
| Consumer Confidence Index (for December) <sup>5</sup>      | 93.1       | 97.8       | 113.7      | 123.1      | 129           | 9.76%            | ◆          |
| Housing Starts (Thousands of Units) <sup>3</sup>           | 1003       | 1112       | 1174       | 1203       | 1213          | 6.25%            | ◆          |
| <b>Prices <sup>4</sup></b>                                 |            |            |            |            |               |                  |            |
| Producer Price Indexes                                     |            |            |            |            |               |                  |            |
| Total Manufacturing (Dec. 1984 = 100)                      | 195.5      | 185.5      | 181.9      | 188.3      | 194.5         | -1.24%           | ◆          |
| Diesel Fuel (June 1985 = 100)                              | 299.6      | 181.3      | 143.5      | 185.7      | 210.5         | -14.74%          | ◆          |
| Consumer Price Indexes (1982-84 = 100)                     |            |            |            |            |               |                  |            |
| All Items  | 236.7      | 237.0      | 240.0      | 245.1      | 252.1         | 1.17%            | ◆          |
| Motor Vehicle Parts and Equipment                          | 144.8      | 144.2      | 143.6      | 143.0      | 144.0         | -0.41%           | ◆          |
| <b>Exchange Rates (Units per U.S. Dollar) <sup>1</sup></b> |            |            |            |            |               |                  |            |
| Broad Index (Jan. 1997 = 100)                              | 104.03     | 117.06     | 122.48     | 122.13     | 122.60        | 5.49%            | ◆          |
| Canada – Dollar  | 1.10       | 1.28       | 1.32       | 1.30       | 1.31          | 5.55%            | ◆          |
| China – Yuan   | 6.16       | 6.28       | 6.64       | 6.76       | 6.40          | 3.12%            | ◇          |
| European Union – Euro (U.S. Dollars per Currency Unit)     | 1.33       | 1.11       | 1.11       | 1.13       | 1.21          | -5.28%           | ◆          |
| Japan – Yen  | 105.74     | 121.05     | 108.66     | 112.10     | 110.00        | 1.97%            | ◆          |
| Mexico – Peso  | 13.30      | 15.87      | 18.67      | 18.88      | 18.92         | 12.39%           | ◆          |

Notes: na = not available. Historical data have been revised.

◆ = Favorable condition for motor vehicle aftermarket

◇ = Indeterminate trend - should monitor

◇ = Unfavorable condition for motor vehicle aftermarket

Sources: Auto Care Association's *Industry Indicators Report*, U.S. Department of Commerce

<sup>1</sup> Federal Reserve Board

<sup>4</sup> U.S. Department of Labor

<sup>2</sup> Institute for Supply Management

<sup>5</sup> The Conference Board

<sup>3</sup> U.S. Census Bureau

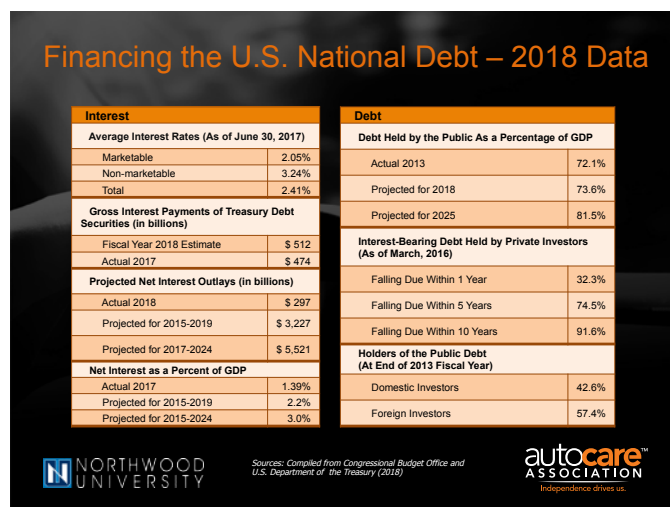
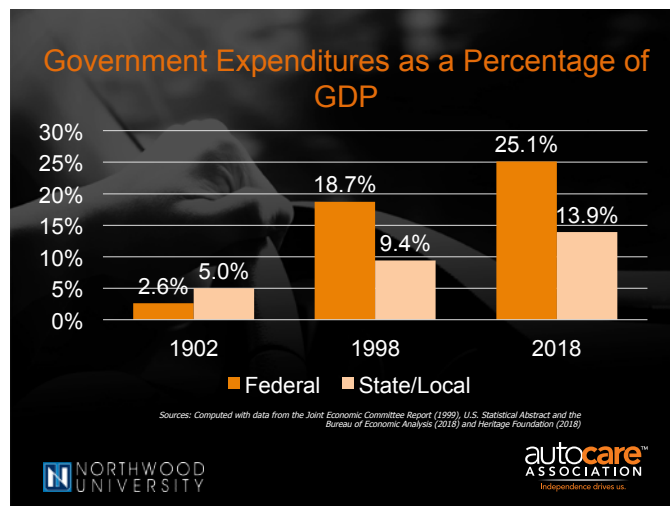
# National Debt (Historical)

## European Finances Improve, Brexit Presents Problems, China Slows and the U.S. National Debt Grows

The European “Financial Crisis” continued to improve in 2017 with most of the EU remaining out of recession. The Chinese economy slowed in 2017 to 6.6 percent GDP growth while Japan grew at 1.7 percent and the European Union grew to 2.4 percent. Aside from minor sources of revenue like oil and mineral rights from government lands, over 96 percent of western governments derive the dollars they spend annually from taxation, borrowing, and/or inflation. The European debt crisis continued to improve in 2017 but is still burdened by countries like Greece and Italy, which have national debts greater than 125 percent of GDP, respectively. The European Union continues to favor a more expansionary monetary policy as a solution to stimulate economic growth. However, the real threat to the European economy moving forward is that the implementation of necessary spending cuts is leaving many to believe that tax increases on the wealthy and businesses are needed. If implemented, tax increases will ensure slow economic growth in Europe in 2018 and the great debate of how to handle Great Britain and the Brexit vote continues. European GDP growth in 2018 is expected to slow with GDP growth estimated to be 2.1 percent for the year.

The U.S. national debt as of April 2018 was 21.16 trillion dollars or roughly 105.5 percent of U.S. GDP in nominal dollars (see chart). In 2018, roughly 18 percent of U.S. federal spending will come from either borrowing or inflationary dollars created by the U.S. Federal Reserve Bank. The U.S. government spent more than 474 billion dollars in 2017 just to pay the gross interest cost of funding our national debt. It is also troubling that government spending at all levels in the United States has gone from less than 8 percent of GDP in 1900 to 39 percent today.

*This summary was prepared by Dr. Timothy G. Nash, Senior Vice President and Director of the McNair Center for the Advancement of Free Enterprise and Entrepreneurship at Northwood University.*



# Industry Employment

The auto care industry added nearly 52,000 jobs in 2017 (an increase of 1.1 percent) from 4.58 million in 2016 to 4.63 million jobs in 2017. The auto care industry total employment represented 3.2 percent of U.S. total non-farm employment of 146 million workers in 2017.

Overall, the nine-year compounded annual growth rate from 2008 to 2017 showed a 1 percent increase in industry employment. During that period, employment growth continued in five out of seven auto care sectors; automotive parts and accessories stores (1.5 percent), tire dealers (1.2 percent), gasoline stations (1.1 percent), automobile dealers (1.1 percent) and automotive repair and maintenance (0.8 percent). Job growth for the industry was partially offset by losses in motor vehicle parts manufacturers (-0.1 percent) during the nine-year period.

Average hourly wages increased in all but one sector during the reporting period from 2008 to 2017. Motor vehicle and parts wholesalers with 2.7 percent recorded the strongest earnings gain.

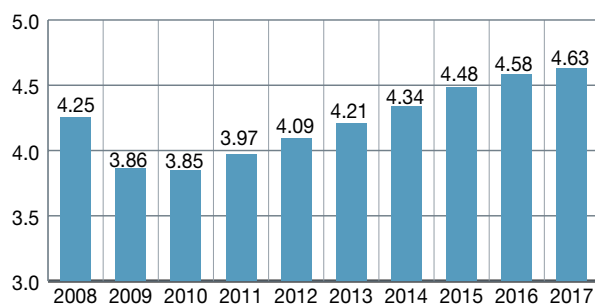
## Industry Employment Trends (Thousands of Jobs)

|  | 2008           | 2009           | 2010           | 2011           | 2012           | 2013           | 2014           | 2015           | 2016           | 2017           | CAGR<br>2008/2017 |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|
| <b>Motor Vehicle Parts Manufacturers (NAICS 3363)</b>        |                |                |                |                |                |                |                |                |                |                |                   |
| Total Employees  | 543.7          | 413.7          | 418.9          | 445.5          | 482.8          | 508.7          | 536.6          | 564.8          | 581.1          | 586.1          | -0.1%             |
| Production Workers   | 430.6          | 317.8          | 323.3          | 345.0          | 365.3          | 385.2          | 415.7          | 436.7          | 448.6          | 450.9          | 0.5%              |
| Production Worker Average Hourly Wage                        | \$20.99        | \$20.85        | \$20.66        | \$20.70        | \$20.01        | \$19.65        | \$19.91        | \$20.23        | \$19.97        | \$19.83        | -0.6%             |
| <b>Motor Vehicles and Parts Wholesalers (NAICS 4231)</b>     |                |                |                |                |                |                |                |                |                |                |                   |
| Total Employees  | 338.1          | 314.5          | 309.0          | 313.0          | 319.9          | 324.8          | 331.4          | 329.6          | 332.4          | 337.4          | 0.0%              |
| Average Hourly Wage (non-supervisory)                        | \$16.32        | \$16.99        | \$17.61        | \$17.96        | \$17.95        | \$19.09        | \$20.23        | \$20.98        | \$20.28        | \$20.69        | 2.7%              |
| <b>Automobile Dealers (NAICS 4411)</b>                       |                |                |                |                |                |                |                |                |                |                |                   |
| Total Employees  | 1,176.7        | 1,018.2        | 1,011.5        | 1,056.9        | 1,095.5        | 1,138.4        | 1,184.9        | 1,238.5        | 1,279.0        | 1,296.5        | 1.1%              |
| Average Hourly Wage (non-supervisory)                        | \$17.13        | \$17.67        | \$18.22        | \$18.61        | \$19.10        | \$19.86        | \$20.34        | \$20.34        | \$20.33        | \$20.60        | 2.1%              |
| <b>Automotive Parts and Accessories Stores (NAICS 44131)</b> |                |                |                |                |                |                |                |                |                |                |                   |
| Total Employees  | 324.8          | 320.3          | 323.3          | 336.2          | 337.3          | 344.1          | 355.8          | 365.0          | 367.9          | 371.1          | 1.5%              |
| Average Hourly Wage (non-supervisory)                        | \$13.19        | \$13.64        | \$14.03        | \$14.44        | \$14.90        | \$15.01        | \$15.32        | \$16.30        | \$16.36        | \$16.01        | 2.2%              |
| <b>Tire Dealers (NAICS 44132)</b>                            |                |                |                |                |                |                |                |                |                |                |                   |
| Total Employees  | 167.0          | 163.1          | 165.9          | 170.6          | 174.5          | 176.9          | 178.6          | 180.0          | 182.3          | 185.5          | 1.2%              |
| Average Hourly Wage (non-supervisory)                        | \$14.51        | \$14.80        | \$15.48        | \$15.90        | \$15.54        | \$15.44        | \$15.34        | \$15.09        | \$15.41        | \$15.60        | 0.8%              |
| <b>Gasoline Stations (NAICS 447)</b>                         |                |                |                |                |                |                |                |                |                |                |                   |
| Total Employees  | 842.4          | 825.5          | 819.3          | 831.0          | 843.5          | 866.3          | 881.0          | 905.1          | 922.8          | 931.1          | 1.1%              |
| Average Hourly Wage (non-supervisory)                        | \$9.46         | \$9.79         | \$10.25        | \$10.25        | \$10.33        | \$10.47        | \$10.62        | \$10.99        | \$11.31        | \$11.50        | 2.2%              |
| <b>Automotive Repair and Maintenance (NAICS 8111)</b>        |                |                |                |                |                |                |                |                |                |                |                   |
| Total Employees  | 856.3          | 805.8          | 801.1          | 819.6          | 832.1          | 847.5          | 868.5          | 896.2          | 913.4          | 923.0          | 0.8%              |
| Average Hourly Wage (non-supervisory)                        | \$15.23        | \$15.27        | \$15.55        | \$16.03        | \$16.00        | \$16.18        | \$16.95        | \$17.41        | \$17.75        | \$18.72        | 2.3%              |
| <b>Total Industry Employment</b>                             | <b>4,249.0</b> | <b>3,861.1</b> | <b>3,849.0</b> | <b>3,972.8</b> | <b>4,085.6</b> | <b>4,206.7</b> | <b>4,336.8</b> | <b>4,479.2</b> | <b>4,578.8</b> | <b>4,630.7</b> | <b>1.0%</b>       |
| <b>YOY % Change</b>  |                | <b>-9.1%</b>   | <b>-0.3%</b>   | <b>3.2%</b>    | <b>2.8%</b>    | <b>3.0%</b>    | <b>3.1%</b>    | <b>3.3%</b>    | <b>2.2%</b>    | <b>1.1%</b>    |                   |

Note: Historical data have been revised. Source: U.S. Bureau of Labor Statistics

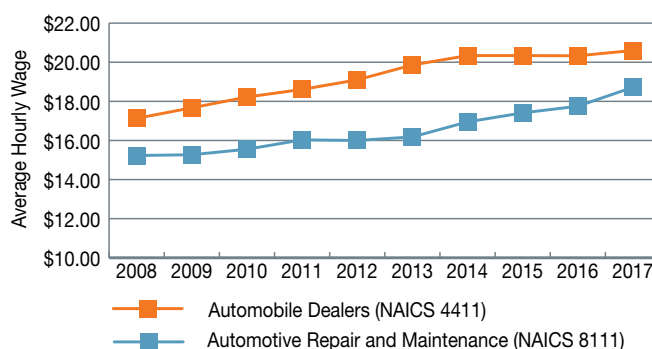
## Industry Employment

(Millions of Jobs)



Note: Historical data have been revised.  
Source: U.S. Bureau of Labor Statistics

## Average Hourly Wage Trends for Selected Categories



Note: Historical data have been revised. Source: U.S. Bureau of Labor Statistics



# Technician Employment and Wages

Maintenance and repair technicians keep the American fleet rolling and, in turn, directly impact nearly everyone in the auto care industry. Automotive technician employment in 2017 totaled more than 896,500 men and women at general repair shops, vehicle dealerships and gasoline service stations. This is up 0.9 percent from 888,500 in 2016.

Despite consolidation among service-providing businesses, the demand for technicians grew at a 9-year compounded annual growth rate (CAGR) of 1.2 percent since 2008 while the supply grew at only a 0.8 percent CAGR during the same period which supports the industry observation that there is an increasing shortage of professional technicians.

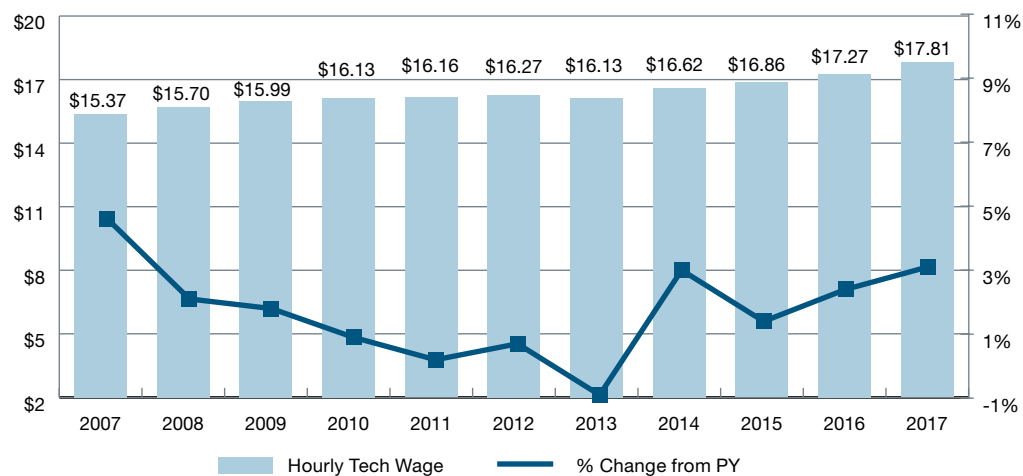
The Bureau of Labor Statistics projects automotive technicians' employment to grow six percent annually through 2026 (\*). The increased number of vehicles in operation, reflecting continued growth in the number of multi-car families, will drive this growth.

Technicians' average hourly wages were higher this year than last, rising 3.1 percent from \$17.27 in 2016 to \$17.81 in 2017.

(\*) Source: Employment Projections program, U.S. Department of Labor, U.S. Bureau of Labor Statistics  
Title: Employment by industry, occupation, and percent distribution, 2016 and projected 2026 49-3023 Automotive service technicians and mechanics.

## Technician's Wages

(Hourly Wage Progression and % Change from Previous Year)

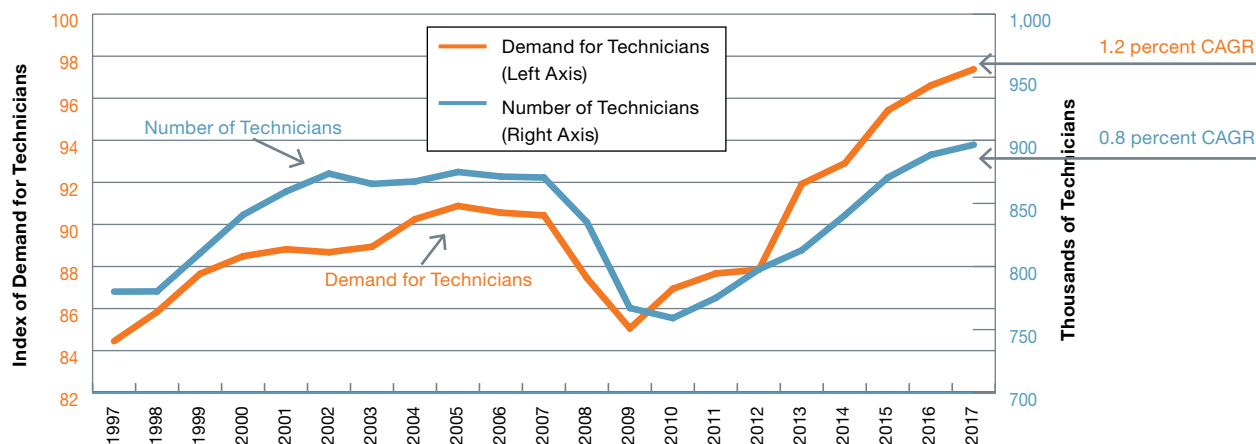


Source: Bureau of Labor Statistics

<http://www.bls.gov/oes/2009/may/oes493023.htm>

<http://www.bls.gov/oes/current/oes493023.htm>

## Technician Employment: Number of and Demand for Technicians



Notes: Tech Demand index based on data for vehicle registrations, miles traveled, vehicle sales, average vehicle age and vehicle quality.  
Tech Supply index is a roll-up of BLS data series including non-management service employment at new car dealers (NAICS 44111 factored by NADA reported tech employment ratio); used car dealers (extrapolated from SIC 551 minus new car dealer techs from NAICS 44111 factored extract); gas stations (NAICS 447 factored by OES estimated technician percent); and automotive repair shops (SIC 753 from CPS / filtered by OES production employment subset). The Index of demand for technicians was re-based this year from 1980 with a new base year of 1997.

Sources: Auto Care Association & M-Visions Insights, LLC/ 2018

Acronyms: BLS= Bureau of Labor Statistics / CES=Current Employment Study / CPS=Current Population Survey / NADA=National Automobile Dealers Association / OES=Occupational Employment Statistics

# Key Issues Impact Survey Results

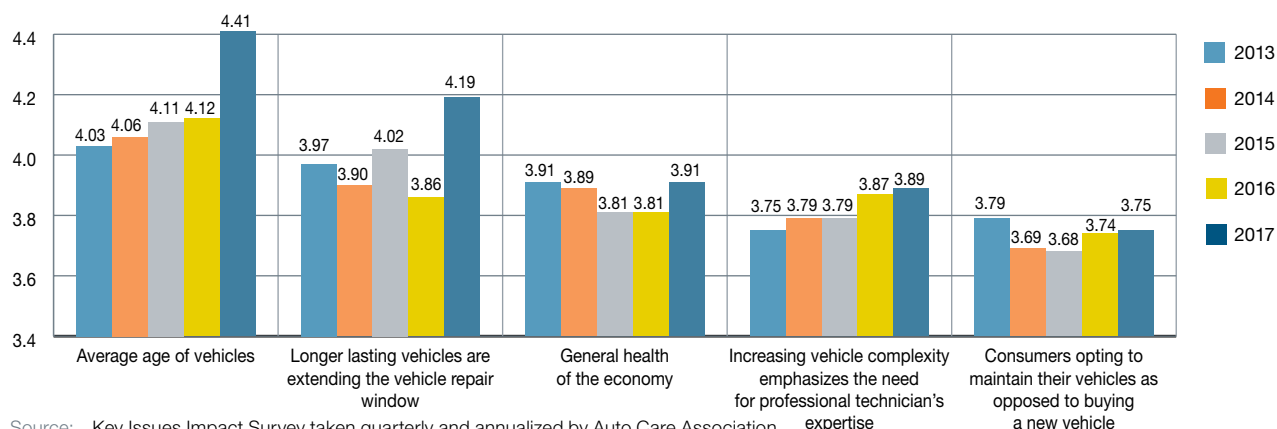
## What Do Our Members Think?

Auto Care Association first released its series of quarterly Key Issues Impact Surveys (KIIS) in January 2011. The purpose of the survey was to gain a better understanding of members' opinions on eighteen key issues impacting their businesses. These issues, identified by the Market Intelligence Committee, focused on four broad areas of the business environment including: the economy, the consumer, technology and DIFM repair outlets.

The survey targeted members of the association who were asked to rate eighteen key issues ranging from average age of vehicles to virtual office/telecommuting, on a scale of one to five, with one having the lowest impact and five having the highest impact on their businesses. Results from the current survey are compared to previous results so that shifts in the relative position of each issue can be monitored and reported at the end of each quarter. The results of this most recent survey completed in December 2017 compared with results from previous quarterly surveys going back to 2013 are presented in the graph below. "Telematics that level the playing field by connecting vehicles to repair shops," has experienced the highest growth rate of 14.8 percent from 2.95 in 2013 to 3.39 in 2017. *Only the top five of the eighteen surveyed issues are presented in the chart.*

### Top Five Issues Key Impact Issues Survey, 2013–2017

(Weighted Annual Averages)



Source: Key Issues Impact Survey taken quarterly and annualized by Auto Care Association.

## Key Issues Impact Survey (KIIS)

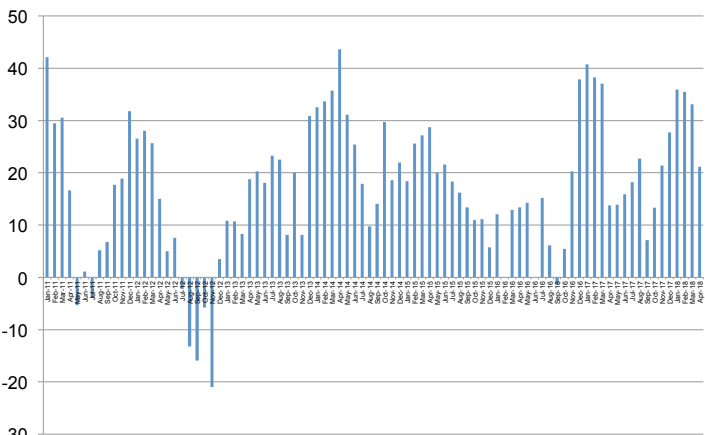
| R  | KEY ISSUES IMPACT SURVEY (KIIS)   | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 5 Yr % Change |
|----|---|------|------|------|------|------|------|---------------|
| 1  | Average age of vehicles   | 3.99 | 4.03 | 4.06 | 4.11 | 4.12 | 4.41 | 9.5%          |
| 2  | Longer lasting vehicles are extending the vehicle repair window                           | 3.81 | 3.97 | 3.90 | 4.02 | 3.86 | 4.19 | 5.5%          |
| 3  | General health of the economy   | 3.84 | 3.91 | 3.89 | 3.81 | 3.81 | 3.91 | 0.0%          |
| 4  | Increasing vehicle complexity emphasizes the need for professional technician's expertise | 3.65 | 3.75 | 3.79 | 3.79 | 3.87 | 3.89 | 3.7%          |
| 5  | Consumers opting to maintain their vehicles as opposed to buying a new vehicle            | 3.70 | 3.79 | 3.69 | 3.68 | 3.74 | 3.75 | -1.3%         |
| 6  | Telematics that could exclude small repair shops  | 3.26 | 3.56 | 3.70 | 3.62 | 3.75 | 3.73 | 4.7%          |
| 7  | Aging baby boomers' preference for professional technician's expertise                    | 3.10 | 3.17 | 3.30 | 3.31 | 3.32 | 3.53 | 11.5%         |
| 8  | Changing volume of new vehicle sales  | 3.35 | 3.44 | 3.46 | 3.42 | 3.34 | 3.40 | -1.0%         |
| 9  | Telematics that currently connect vehicles to primary, new car dealers                    | 2.90 | 3.18 | 3.28 | 3.28 | 3.35 | 3.40 | 7.0%          |
| 10 | Telematics that level the playing field by connecting vehicles to repair shops            | 2.73 | 2.95 | 3.11 | 2.96 | 3.19 | 3.39 | 14.8%         |
| 11 | Increased efficiency and productivity of service bays                                     | 2.89 | 2.98 | 3.12 | 3.00 | 3.01 | 3.37 | 13.3%         |
| 12 | Changes in DIFM service events  | 2.95 | 3.11 | 3.17 | 3.15 | 3.07 | 3.25 | 4.4%          |
| 13 | Unemployment and household budgets  | 3.80 | 3.80 | 3.63 | 3.56 | 3.41 | 3.16 | -16.8%        |
| 14 | The decrease in the total number of new car dealers                                       | 3.01 | 2.99 | 2.92 | 2.87 | 2.82 | 3.08 | 2.9%          |
| 15 | Consumer debt   | 3.36 | 3.34 | 3.30 | 3.13 | 3.13 | 2.96 | -11.4%        |
| 16 | Fewer new light truck sales   | 2.87 | 2.85 | 2.97 | 2.93 | 2.83 | 2.82 | -1.1%         |
| 17 | Consumers seeking alternative forms of transportation                                     | 2.62 | 2.62 | 2.75 | 2.59 | 2.79 | 2.78 | 6.3%          |
| 18 | Virtual office/telecommuting  | 2.34 | 2.36 | 2.50 | 2.52 | 2.58 | 2.44 | 3.5%          |

R = Relative rank of each issue based upon annualized scores in 2017.

What Do Our Members Think? (Continued)

According to April, 2018 Results of Auto Care Association / Northwood University Business and Economic Confidence Index

Chart 1: Auto Care Association/NU Business Confidence Index



| Table 1: Auto Care Association/Northwood University Automotive Aftermarket Business Confidence Index |               |
|--|---------------|
| Assessment   | Numeric Range |
| Significantly Less Confident   | -100 to -51   |
| Slightly Less Confident  | -50 to -1     |
| No Change  | 0             |
| Slightly More Confident  | 1 to 50       |
| Significantly More Confident   | 51 to 100     |
| Current Index Position   | 21.15         |

April Position:  
**21.15**

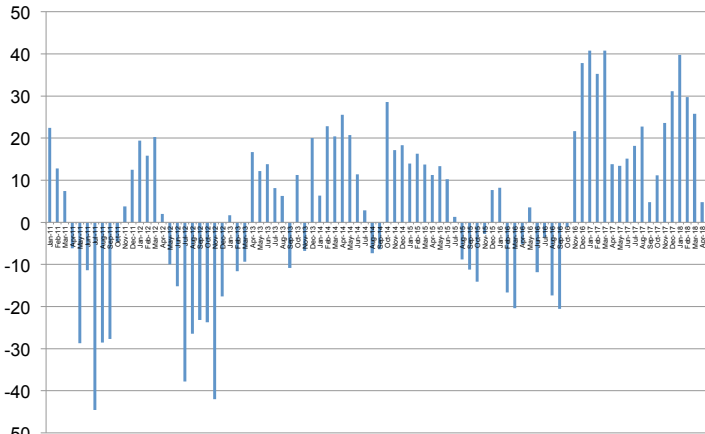
The 89<sup>th</sup> monthly installment of the survey was sent to members on April 4, 2018. Results are calculated monthly and reported in Auto CarE-news. Member responses will be used solely in the aggregate and for the purpose of providing empirical information.

For more information, contact Auto Care Association market intelligence at 301-654-6664 or Dr. Timothy G. Nash, Northwood University at 989-837-4323. These indices are prepared monthly by Dr. Nash and Northwood University aftermarket major, Mr. Matt Fusco.

Results of the joint Business Confidence Index for April 2018 show that aftermarket business leaders had a slightly more confident outlook on the economy and the automotive aftermarket over the next 12 months.

- Auto Care Association members completed the 88th monthly index survey and according to the data:
- The overall Auto Care Association/Northwood University Automotive Aftermarket Business Confidence Index for April 2018 was 21.15, down from the March 2018 reading of 33.09 (Chart 1), keeping aftermarket leaders on the medium side of the “slightly more confident” category (see Table 1).
  - The overall Auto Care Association/Northwood University Automotive Aftermarket Economic Confidence Index for April 2018 stood at 4.81, down from the March 2018 reading of 25.74 (Chart 2), keeping aftermarket business leaders on the low side of “slightly more confident” in the economy as a whole in April (see Table 2). This is the eighteenth month in a row since November 2017 that the index has been positive.

Chart 2: Auto Care Association/NU Economic Confidence Index



| Table 2: Auto Care Association/Northwood University Automotive Aftermarket Economic Confidence Index |               |
|--|---------------|
| Assessment   | Numeric Range |
| Significantly Less Confident   | -100 to -51   |
| Slightly Less Confident  | -50 to -1     |
| No Change  | 0             |
| Slightly More Confident  | 1 to 50       |
| Significantly More Confident   | 51 to 100     |
| Current Index Position   | 4.81          |

March Position:  
**4.81**

## NEW REPORT

# DISRUPTIVE TRENDS SHAPING THE FUTURE OF THE AFTERMARKET: E-COMMERCE AND STRATEGY

### PURCHASES

**\$50+**  
BILLION

**E-tailing** via public websites and e-procurement via proprietary systems for professionals – are more than \$50 billion and will grow much faster than the overall aftermarket through 2020.

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VARIES BY  
CATEGORY:**



**Online preferred**  
for discretionary and  
research-intensive.



**Stores preferred**  
for urgent brake-fix  
and items with low  
price/weight ratio.

### CUSTOMER PREFERENCES

**DIY:**



75% of DIY customers do  
**online research** before  
in-store purchases.



Price and in-stock  
availability drive  
**2 out of every 3**  
purchase decisions.

**CUSTOMERS  
RATE:**



**E-tailers higher** on  
price and availability  
of ratings or reviews.



**Stores higher** on  
installation instructions,  
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**DIFM:**



**Delivery time** expectations  
vary widely by product  
category: immediate to more  
than 3 days, which will drive  
e-commerce penetration.



More than 50% of  
DIFM service providers  
**have used e-tailers**  
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# U.S. Motor Vehicle Auto Care Industry

in this section

## **Introduction to Channel Forecast Model**

A business narrative including the history, information sources, management resources and benefits derived from the model

## **Forecast Assumptions**

A comparison of last year's forecast assumptions versus actual results and a business narrative for the forecast horizon

## **U.S. Motor Vehicle Auto Care Industry**

An overview of the U.S. motor vehicle auto care industry, including the automotive (i.e., light vehicle) and the heavy duty industry

## **Auto Care Industry Sales History and Forecast**

A summary of the U.S. auto care industry with historical data and forecast

## **Auto Care Sales by Distribution Channel**

Overall sales of auto care parts and services for the primary consumer-level channels of distribution

## **Auto Care Segmentation**

Data on the size of the automotive segment of the industry, including DIY, DIFM and tire markets

## **Auto Care Service and Retail Channels**

Outlet counts for the service and retail channels of distribution

## **Auto Care Service and Retail Outlet Analysis**

A comparison of average sales for selected service and retail outlets

## **Program and Retail Distribution Summary**

An overview of the major groups, presidents, year established and the number of WD members, jobbers and member service centers

# Introduction to the Channel Forecast Model

## Background

This model is the outgrowth of an earlier project started some years ago by the Auto Care Association Market Intelligence Committee. The project consultant is IHS Markit (which includes the former Global Insight and Polk Automotive) who has been managing the project since 2007. IHS Markit is considered a leader in economic and financial analysis, forecasting, and market intelligence for more than 40 years ([www.ihsmarkit.com](http://www.ihsmarkit.com)).

The Channel Forecast Model is based on the results from the five year Economic Census report (starting with 1997 and most recently 2012). The model uses that baseline data to determine the present (nominal) dollar value of sales at end user prices for each of the automotive aftermarket's channels of distribution and presents a total of the channel sales to provide a complete market overview.

The automotive aftermarket, as it is defined for this project, consists of all non-warranty, retail sales of parts, accessories, and services for light vehicles. Included are retail sales of paint, tools and equipment for repairs (including for collision repair), trim and interior products, vehicle restorations, replacement glass and tires. The automotive segment of the aftermarket includes the replacement parts, accessories, chemicals, tires and non-warranty service for passenger cars and light trucks. *The model accounts for the potential double-counting of revenue by including only those sales that are classified as sales made to the general public.*

**As of 2017, the model uses the 2012 Economic Census data as a base, the model:**

- Estimates values of Economic Census results for those historical years that are not covered by the report, and
- Forecast out, through 2020, the values of the census data.

Included in the estimated/forecasted values referenced above are a set of 41 motor vehicle aftermarket's channels of distribution agreed upon for use as the set of NAICS subcategories. These 41 channels are all the categories from the Census that displayed sales of relevant automotive product lines.

The three main sources of data used as inputs in the model are (1) U.S. Economic Census data; (2) Industrial Marketing Research Inc. and (3) IHS Markit Inc. (for economic data as well as industry data provided by its automotive group, which includes the former R.L. Polk).

Baseline model data are the 1997, 2002, 2007 and 2012 Economic Census data. From this baseline data, the remaining three sources are used as drivers for the model. The Census survey provides information on sales by both product line and NAICS codes, all of which are released every five years. Due to the volume of information collected, it takes the Census Bureau approximately four years to release the data following the reporting year. The model was re-based in 2016 with the new baseline 2012 data released with the 2017 model update.

Industrial Marketing Research (IMR) provides data from their Continuing Consumer Auto Maintenance Survey, which provides replacement rate data broken out by 27 ML/RL (product codes) for 10 types of vehicles, by age. This survey is conducted at the end of each quarter and includes 100,000 participants and approximately 187,000 vehicles, annually.



R. L. Polk, now part of the automotive group of IHS Markit, provides the Auto Care Association with vehicle sales and registrations (VIO data) each year. This data is lagged by one year, but is not a result of sampling. The data is broken into 10 vehicle classes and vintage.

IHS Markit data is a combination of proprietary data and macroeconomic data that are relevant to the automotive aftermarket industry and includes unit sales of cars and light trucks, a variety of Consumer Price Index (CPI) indices, retail sales for different automotive related channels, etc. This data is used as the initial demand driver within the model and acts as the primary forecast drivers.

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## 2018 U.S. Aftermarket Channel Forecast Model Review and Analysis of Trends Impacting the Market

The IHS Markit U.S. Aftermarket Channel Forecast Model was re-based in 2017 to incorporate the 2012 U.S. Economic Census data. In the spring of 2018 IHS Markit completed its annual review and update of the model. This annual review revisits the forecast for 2017 and generates a new four-year forecast, which now runs through 2021.

Last year's forecast included an expectation of 3.5 percent growth for 2017. The current model shows a downward revision for 2017 to 3.1 percent growth. Many of the key drivers saw the final results under-perform expectations, as total vehicles sales declined more than expected, nominal GDP growth was lower than forecast and disposable income did not rise as much as assumed. The final result was that the total U.S. light vehicle aftermarket sales for 2017 was \$285.8 billion, which was just over a billion less than the previous forecast.

# 2016–2021 Forecast Assumptions

## Forecast Assumptions

Despite getting off to a slow start in 2018, the economy continues to maintain solid momentum. Nominal GDP growth for the year is expected to be 4.8 percent, which is up from the 4.1 percent growth seen in 2017. Nominal GDP growth should peak in 2019 at 5.5 percent before cooling a bit in the outbound years. Consumer spending growth will continue to support the economic expansion, underpinned by lower personal tax rates and gains in employment, disposable income, and home values. Miles traveled growth slowed in 2017 after two strong growth years in 2015 and 2016 but continued strength in the employment market should contribute to a rebound there.

| 2018 Aftermarket Forecast 2017 Review |                             |                                    |
|---------------------------------------|-----------------------------|------------------------------------|
|                                       | 2017 Estimate<br>(% change) | 2016 Final<br>Result<br>(% change) |
| Total Aftermarket Sales               | 3.5%                        | 3.1%                               |
| New Car Dealer Sales                  | 2.7%                        | 3.7%                               |
| Auto Parts Stores                     | 3.1%                        | 2.3%                               |
| General Auto Repair                   | 3.8%                        | 2.7%                               |

Source: IHS Markit

## Market Trends Influencing the Aftermarket

- While recession risks remain present, economic growth should remain slow and steady going forward. Domestic demand will continue to drive growth.
- A confident consumer will ensure that consumer spending remains the driving force of economic growth. The three month average to start 2018 for the consumer sentiment index was the highest since 2001. This level of optimism should continue as the job market remains strong, wages continue to inch upwards and the housing market keeps improving.
- While the savings rate is expected to tick up over 4 percent in 2019 after being at 3.4 percent for 2017 and forecast to remain at that level in 2018, consumer spending will remain strong as incomes continue to rise. Consumers are expected to increase spending 4.6 percent annually through the forecast as disposable income will rise just under 5 percent annually.
- The long-term outlook for gas prices remains unchanged. Prices did increase higher than expected in 2017, partially resulting from Hurricane Harvey's impact on the oil and gas industry in Texas, and will continue to rise in 2018 before coming back in late 2018 and 2019. The rise likely helped slow total miles driven last year.
- After growing almost 2.4 percent in both 2015 and 2016, total miles driven increased just 1.2 percent in 2017. Continued strength in the employment market and rising consumer spending should get drivers moving again and help get miles driven growth back up over 2 percent for the year.
- New vehicle sales peaked in 2016 and dropped nearly two percent in 2017. While annual sales should continue to fall each year through the forecast, they will remain above 16.5 million in 2021. Even with five consecutive years of declining sales, the volume will remain high enough to keep demand strong and prevent any trough of aging vehicles similar to what was seen shortly after the 2008 recession.
- While vehicle sales peaked in 2016 and will decline going forward, total vehicles in operation (VIO) shows no sign of slowing. For 2018 VIO should increase nearly 2.5 percent to just under 279 million. Growth will slow going forward but by 2021 there is expected to be more than 294 million vehicles on the road in the U.S.

The share of sales through the three main channel groups is expected to remain steady through 2021. The dealer channels are expected to maintain their 30.1 percent share of all sales. The retail channels are expected to provide 35.4 percent of all sales with the remaining 34.5 percent handled by the service channels. Within these groupings there will certainly be channels that outperform. The new car dealer channel is expected to just outperform the overall market. Within the retail channel, "Electronic shipping and mail-order houses" will see annual growth at more than twice that of the overall market, making up for underperformance in the "Automotive parts and accessories stores" category.

IHS Markit forecasts total sales of the U.S. light duty aftermarket to come in at just under \$296 billion for 2018. That figure will be 3.6 percent higher than the \$285.8 billion seen in 2017. Annual growth will cool each year of the forecast, with 2021 growth expected to be 3.2 percent and resulting in total sales that year of more than \$326 billion. The 2021 figure will represent nearly \$90 billion in sales growth since 2012.

# U.S. Motor Vehicle Auto Care Industry

The U. S. motor vehicle aftermarket, consisting of light vehicles, medium and heavy duty trucks, will also be referred to in this report as the Auto Care Industry. This \$379 billion industry in 2017 is expected to grow at a compounded annual growth rate of 3.4 percent per year and reach \$433.3 billion in 2021. It is expected this growth will be fueled by a gradually increasing number of miles driven, the increasing average age of vehicles and more specifically the growth of vehicle population in the 11 year and older category. Motorists recognize that vehicles are engineered to last longer and are therefore demonstrating a willingness to take advantage of the favorable economies of vehicle maintenance and repair vs. the cost of purchasing new vehicles.

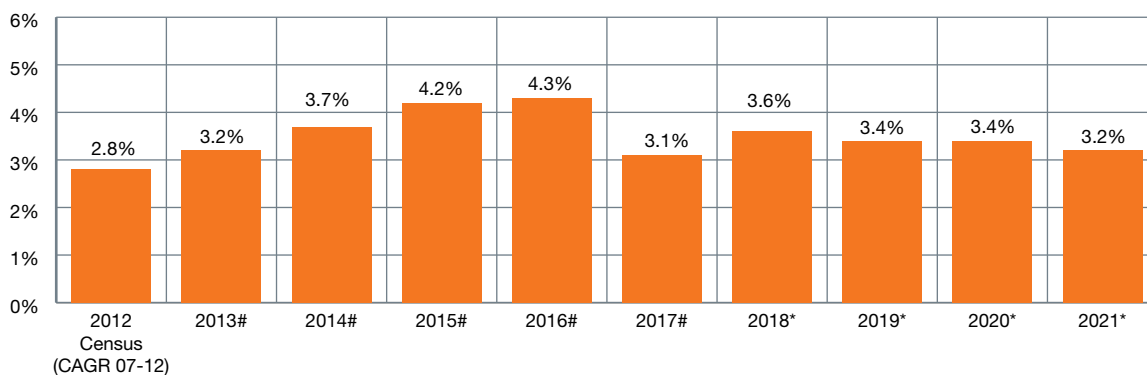
This new *2019 Digital Factbook* from the Auto Care Association is intended to help provide further details about the factors influencing the growth of the auto care industry.

## Size of the U.S. Motor Vehicle Auto Care Industry (Billions of Consumer Dollars)

| Year          | Automotive | Medium and Heavy Duty | Total Aftermarket | Automotive YOY Percent Change | Total Market YOY Percent Change |
|---------------|------------|-----------------------|-------------------|-------------------------------|---------------------------------|
| 2007 (Census) | \$207.9    | \$68.8                | \$276.7           |                               |                                 |
| 2012 (Census) | \$238.3    | \$78.9                | \$317.2           |                               |                                 |
| CAGR ('07-12) | 2.8%       | 2.8%                  | 2.8%              |                               |                                 |
| 2012 (Census) | \$238.3    | \$78.9                | \$317.2           |                               |                                 |
| 2013#         | \$245.9    | \$81.6                | \$327.5           | 3.2%                          | 3.2%                            |
| 2014#         | \$255.0    | \$84.4                | \$339.4           | 3.7%                          | 3.6%                            |
| 2015#         | \$265.8    | \$87.2                | \$353.0           | 4.2%                          | 4.0%                            |
| 2016#         | \$277.1    | \$90.2                | \$367.3           | 4.3%                          | 4.0%                            |
| 2017#         | \$285.8    | \$93.3                | \$379.1           | 3.1%                          | 3.2%                            |
| 2018*         | \$296.0    | \$96.4                | \$392.4           | 3.6%                          | 3.5%                            |
| 2019*         | \$306.2    | \$99.7                | \$405.9           | 3.4%                          | 3.4%                            |
| 2020*         | \$316.6    | \$103.1               | \$419.7           | 3.4%                          | 3.4%                            |
| 2021*         | \$326.7    | \$106.6               | \$433.3           | 3.2%                          | 3.2%                            |
| CAGR ('17-21) | 3.4%       | 3.4%                  | 3.4%              |                               |                                 |

## Year Over Year Growth of the U.S. Automotive Aftermarket

(Percent Change from Previous Year)



Notes: # Estimate \* Forecast  
Historical data have been revised. Figures do not include warranty work.

Source: Auto Care Association / AASA Channel Forecast Model



# Auto Care Industry Sales History and Forecast

## Auto Care Sales by Channel: History & Forecast (USD Millions)

|   |         |                |                |                |                |                |                |                |                |                |                |                | 4 YR<br>CAGR | 4 YR<br>CAGR |
|---|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|
|   | NAICS   | 2007<br>Census | 2012<br>Census | 2013#          | 2014#          | 2015#          | 2016#          | 2017#          | 2018*          | 2019*          | 2020*          | 2021*          | (13-17)      | (17-21)      |
| General automotive repair   | 811111  | 30,961         | 34,957         | 35,905         | 36,987         | 38,681         | 40,469         | 41,556         | 43,063         | 44,691         | 46,452         | 47,985         | 3.7%         | 3.7%         |
| Automotive body, paint, and interior repair and maintenance       | 811121  | 22,855         | 27,912         | 28,616         | 29,394         | 30,299         | 31,336         | 32,140         | 33,226         | 34,274         | 35,347         | 36,282         | 2.9%         | 3.1%         |
| Car washes  | 811192  | 5,306          | 6,903          | 7,153          | 7,424          | 7,717          | 8,066          | 8,317          | 8,591          | 8,853          | 9,144          | 9,420          | 3.8%         | 3.2%         |
| Automotive oil change and lubrication shops                       | 811191  | 4,563          | 5,078          | 5,220          | 5,391          | 5,599          | 5,879          | 6,050          | 6,281          | 6,539          | 6,823          | 7,073          | 3.8%         | 4.0%         |
| Automotive glass replacement shops                                | 811122  | 3,023          | 3,098          | 3,194          | 3,300          | 3,419          | 3,568          | 3,677          | 3,811          | 3,946          | 4,084          | 4,208          | 3.6%         | 3.4%         |
| Automotive transmission repair                                    | 811113  | 2,613          | 2,230          | 2,217          | 2,217          | 2,234          | 2,259          | 2,331          | 2,411          | 2,503          | 2,600          | 2,684          | 1.3%         | 3.6%         |
| Other automotive mechanical and electrical repair and maintenance | 811118  | 2,118          | 1,686          | 1,723          | 1,768          | 1,823          | 1,879          | 1,934          | 2,006          | 2,084          | 2,168          | 2,243          | 2.9%         | 3.8%         |
| All other automotive repair and maintenance                       | 811198  | 1,093          | 1,374          | 1,400          | 1,429          | 1,466          | 1,499          | 1,533          | 1,584          | 1,633          | 1,684          | 1,727          | 2.3%         | 3.0%         |
| Automotive exhaust system repair                                  | 811112  | 1,357          | 714            | 714            | 717            | 724            | 731            | 753            | 782            | 814            | 850            | 881            | 1.3%         | 4.0%         |
| Personal and household goods repair and maintenance               | 8114    | 20             | 108            | 110            | 113            | 116            | 117            | 120            | 123            | 126            | 128            | 130            | 2.0%         | 2.0%         |
| <b>Total Services</b>   |         | <b>73,909</b>  | <b>84,060</b>  | <b>86,253</b>  | <b>88,738</b>  | <b>92,077</b>  | <b>95,804</b>  | <b>98,411</b>  | <b>101,877</b> | <b>105,463</b> | <b>109,281</b> | <b>112,632</b> | <b>3.4%</b>  | <b>3.4%</b>  |
| <b>YOY % Change</b>   |         |                |                | <b>2.6%</b>    | <b>2.9%</b>    | <b>3.8%</b>    | <b>4.0%</b>    | <b>2.7%</b>    | <b>3.5%</b>    | <b>3.5%</b>    | <b>3.6%</b>    | <b>3.1%</b>    |              |              |
| Automotive parts and accessories stores (**)                      | 441310  | 22,576         | 27,473         | 28,304         | 29,340         | 30,437         | 31,532         | 32,242         | 33,171         | 34,037         | 34,973         | 35,834         | 3.3%         | 2.7%         |
| Tire dealers  | 441320  | 14,742         | 17,402         | 17,962         | 18,617         | 19,387         | 20,102         | 20,558         | 21,114         | 21,680         | 22,130         | 22,571         | 3.4%         | 2.4%         |
| Warehouse clubs and supercenters                                  | 452910  | 8,120          | 14,351         | 15,494         | 16,710         | 17,906         | 19,029         | 19,659         | 20,332         | 21,023         | 21,686         | 22,422         | 6.1%         | 3.3%         |
| Electronic shopping and mail-order houses                         | 4541    | 4,143          | 7,141          | 7,877          | 8,690          | 9,621          | 10,578         | 11,480         | 12,445         | 13,427         | 14,389         | 15,379         | 9.9%         | 7.6%         |
| Other gasoline stations   | 447190  | 5,605          | 4,337          | 4,431          | 4,525          | 4,624          | 4,726          | 4,837          | 4,991          | 5,130          | 5,260          | 5,391          | 2.2%         | 2.7%         |
| Gasoline stations with convenience stores                         | 447110  | 4,073          | 3,620          | 3,769          | 3,924          | 4,069          | 4,229          | 4,340          | 4,480          | 4,614          | 4,745          | 4,871          | 3.6%         | 2.9%         |
| Discount department stores  | 452112  | 2,744          | 2,339          | 2,388          | 2,435          | 2,487          | 2,520          | 2,572          | 2,646          | 2,710          | 2,773          | 2,840          | 1.9%         | 2.5%         |
| Wholesale trade   | 42      | 1,911          | 1,916          | 1,964          | 2,013          | 2,067          | 2,129          | 2,179          | 2,238          | 2,299          | 2,347          | 2,390          | 2.6%         | 2.3%         |
| All other general merchandise stores                              | 452990  | 813            | 1,186          | 1,235          | 1,285          | 1,340          | 1,386          | 1,417          | 1,459          | 1,495          | 1,522          | 1,548          | 3.5%         | 2.2%         |
| Fuel dealers  | 45431   | 487            | 757            | 791            | 829            | 870            | 913            | 930            | 968            | 1,005          | 1,040          | 1,076          | 4.1%         | 3.7%         |
| Lawn and garden equipment and supplies stores                     | 4442    | 646            | 336            | 344            | 351            | 359            | 364            | 372            | 382            | 392            | 398            | 405            | 2.0%         | 2.1%         |
| Hardware stores   | 444130  | 236            | 236            | 239            | 241            | 244            | 245            | 251            | 258            | 264            | 268            | 273            | 1.2%         | 2.1%         |
| Department stores (except discount department stores)             | 452111  | 89             | 129            | 134            | 138            | 144            | 150            | 153            | 160            | 166            | 172            | 178            | 3.5%         | 3.9%         |
| Supermarkets and other grocery (except convenience) stores        | 445110  | 49             | 98             | 105            | 111            | 118            | 124            | 127            | 131            | 134            | 136            | 138            | 5.0%         | 2.1%         |
| Electronics and appliance stores                                  | 4431    | 59             | 99             | 102            | 104            | 106            | 107            | 109            | 113            | 115            | 117            | 119            | 1.9%         | 2.1%         |
| Sporting goods stores   | 451110  | 62             | 77             | 80             | 84             | 88             | 92             | 95             | 99             | 103            | 107            | 111            | 4.1%         | 4.2%         |
| Convenience stores  | 445120  | 90             | 71             | 73             | 74             | 76             | 77             | 79             | 81             | 83             | 85             | 86             | 2.0%         | 2.1%         |
| Pharmacies and drug stores  | 446110  | 60             | 52             | 54             | 55             | 56             | 58             | 59             | 60             | 62             | 63             | 64             | 2.2%         | 2.2%         |
| All Others  | Various | 217            | 92             | 95             | 98             | 101            | 104            | 106            | 109            | 112            | 114            | 115            | 2.8%         | 2.1%         |
| <b>Total Retail</b>   |         | <b>66,722</b>  | <b>81,714</b>  | <b>85,440</b>  | <b>89,625</b>  | <b>94,101</b>  | <b>98,466</b>  | <b>101,564</b> | <b>105,235</b> | <b>108,849</b> | <b>112,326</b> | <b>115,812</b> | <b>4.4%</b>  | <b>3.3%</b>  |
| <b>YOY % Change</b>   |         |                |                | <b>4.6%</b>    | <b>4.9%</b>    | <b>5.0%</b>    | <b>4.6%</b>    | <b>3.1%</b>    | <b>3.6%</b>    | <b>3.4%</b>    | <b>3.2%</b>    | <b>3.1%</b>    |              |              |
| <b>Total Independent Market</b>                                   |         | <b>140,631</b> | <b>165,774</b> | <b>171,693</b> | <b>178,363</b> | <b>186,178</b> | <b>194,271</b> | <b>199,975</b> | <b>207,112</b> | <b>214,312</b> | <b>221,606</b> | <b>228,444</b> | <b>3.9%</b>  | <b>3.4%</b>  |
| <b>YOY % Change</b>   |         |                |                | <b>3.6%</b>    | <b>3.9%</b>    | <b>4.4%</b>    | <b>4.3%</b>    | <b>2.9%</b>    | <b>3.6%</b>    | <b>3.5%</b>    | <b>3.4%</b>    | <b>3.1%</b>    |              |              |
| New car dealers   | 441110  | 61,316         | 67,026         | 68,713         | 71,014         | 73,943         | 77,165         | 79,985         | 82,859         | 85,727         | 88,653         | 91,736         | 3.9%         | 3.5%         |
| Used car dealers  | 441120  | 1,708          | 1,908          | 1,939          | 1,972          | 2,018          | 2,061          | 2,114          | 2,170          | 2,230          | 2,290          | 2,345          | 2.2%         | 2.6%         |
| Other motor vehicle dealers                                       | 4412    | 4,262          | 3,580          | 3,589          | 3,600          | 3,628          | 3,640          | 3,728          | 3,829          | 3,923          | 4,022          | 4,133          | 1.0%         | 2.6%         |
| <b>Total Dealer</b>   |         | <b>67,286</b>  | <b>72,513</b>  | <b>74,241</b>  | <b>76,586</b>  | <b>79,588</b>  | <b>82,866</b>  | <b>85,828</b>  | <b>88,859</b>  | <b>91,881</b>  | <b>94,965</b>  | <b>98,213</b>  | <b>3.7%</b>  | <b>3.4%</b>  |
| <b>YOY % Change</b>   |         |                |                | <b>2.4%</b>    | <b>3.2%</b>    | <b>3.9%</b>    | <b>4.1%</b>    | <b>3.6%</b>    | <b>3.5%</b>    | <b>3.4%</b>    | <b>3.4%</b>    | <b>3.4%</b>    |              |              |
| Sales Summary   |         | 2007           | 2012           | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           |              |              |
| Total Independent Market  |         | 140,631        | 165,774        | 171,693        | 178,363        | 186,178        | 194,271        | 199,975        | 207,112        | 214,312        | 221,606        | 228,444        | 3.9%         | 3.4%         |
| Total Dealer Market   |         | 67,286         | 72,513         | 74,241         | 76,586         | 79,588         | 82,866         | 85,828         | 88,859         | 91,881         | 94,965         | 98,213         | 3.7%         | 3.4%         |
| Total Auto Care Market  |         | 207,917        | 238,287        | 245,935        | 254,950        | 265,767        | 277,136        | 285,803        | 295,971        | 306,192        | 316,572        | 326,657        | 3.8%         | 3.4%         |
| <b>YOY % Change</b>   |         |                |                | <b>3.2%</b>    | <b>3.7%</b>    | <b>4.2%</b>    | <b>4.3%</b>    | <b>3.1%</b>    | <b>3.6%</b>    | <b>3.4%</b>    | <b>3.4%</b>    | <b>3.2%</b>    |              |              |
| Market Share Summary  |         |                |                |                |                |                |                |                |                |                |                |                |              |              |
| Total Independent Market  |         | 67.6%          | 69.6%          | 69.8%          | 70.0%          | 70.1%          | 70.1%          | 70.0%          | 70.0%          | 70.0%          | 70.0%          | 69.9%          |              |              |
| Total Dealer Market   |         | 32.4%          | 30.4%          | 30.2%          | 30.0%          | 29.9%          | 29.9%          | 30.0%          | 30.0%          | 30.0%          | 30.0%          | 30.1%          |              |              |
| Total Auto Care Market  |         | 100.0%         | 100.0%         | 100.0%         | 100.0%         | 100.0%         | 100.0%         | 100.0%         | 100.0%         | 100.0%         | 100.0%         | 100.0%         |              |              |

Notes: # Estimated \* Forecast (\*\*) Auto Parts and Accessories store sales include those sales to the general public.

Source: Auto Care Association / AASA Channel Forecast Model.

# Auto Care Sales by Distribution Channel

Calling our readers' attention to the previous page, the largest channels in 2017 were new vehicle dealers (\$80 billion), general automotive repair shops (\$41.6 billion) and automotive parts and accessories stores (\$32.2 billion). Major channels (over \$5 billion) experiencing the highest 4-year CAGR (2013-2017) were electronic shopping & mail-order houses (9.9 percent), warehouse clubs & superstores (6.1 percent), car washes (3.8 percent) and automotive oil change and lubrication shops (3.8 percent). During the past four years, the overall industry CAGR was 3.8 percent and is forecasted to continue growing at a projected CAGR of 3.4 percent through 2021.

In 2017, auto care parts, accessories, tires and services for light vehicles were sold directly to consumers through 41 channels of distribution. Because eight (8) of these channels were very low volume, they were placed in the "other" category. These 41 channels represent all of the establishments selling automotive products and services.

## Auto Care Sales to End Users by Sales Channel (USD Millions)

|   |         |          | Share of Sales (2016) |        | Value of Sales (2016) |        |          | Share of Sales (2017) |        | Value of Sales (2017) |        |
|---|---------|----------|-----------------------|--------|-----------------------|--------|----------|-----------------------|--------|-----------------------|--------|
| Channel Sales (USD Millions)                                      | NAICS   | 2016 (#) | DIFM                  | DIY    | DIFM                  | DIY    | 2017 (#) | DIFM                  | DIY    | DIFM                  | DIY    |
| General automotive repair   | 811111  | 40,469   | 97.0%                 | 3.0%   | 39,255                | 1,214  | 41,556   | 97.0%                 | 3.0%   | 40,310                | 1,247  |
| Automotive body, paint, and interior repair and maintenance       | 811121  | 31,336   | 93.0%                 | 7.0%   | 29,143                | 2,194  | 32,140   | 93.0%                 | 7.0%   | 29,890                | 2,250  |
| Car washes  | 811192  | 8,066    | 98.0%                 | 2.0%   | 7,904                 | 161    | 8,317    | 98.0%                 | 2.0%   | 8,151                 | 166    |
| Automotive oil change and lubrication shops                       | 811191  | 5,879    | 94.0%                 | 6.0%   | 5,526                 | 353    | 6,050    | 94.0%                 | 6.0%   | 5,687                 | 363    |
| Automotive glass replacement shops                                | 811122  | 3,568    | 91.0%                 | 9.0%   | 3,247                 | 321    | 3,677    | 91.0%                 | 9.0%   | 3,346                 | 331    |
| Automotive transmission repair                                    | 811113  | 2,259    | 91.0%                 | 9.0%   | 2,056                 | 203    | 2,331    | 91.0%                 | 9.0%   | 2,122                 | 210    |
| Other automotive mechanical and electrical repair and maintenance | 811118  | 1,879    | 95.0%                 | 5.0%   | 1,785                 | 94     | 1,934    | 95.0%                 | 5.0%   | 1,837                 | 97     |
| All other automotive repair and maintenance                       | 811198  | 1,499    | 87.0%                 | 13.0%  | 1,304                 | 195    | 1,533    | 87.0%                 | 13.0%  | 1,334                 | 199    |
| Automotive exhaust system repair                                  | 811112  | 731      | 91.0%                 | 9.0%   | 666                   | 66     | 753      | 91.0%                 | 9.0%   | 685                   | 68     |
| Personal and household goods repair and maintenance               | 8114    | 117      | 96.0%                 | 4.0%   | 112                   | 5      | 120      | 96.0%                 | 4.0%   | 115                   | 5      |
| Total Services  |         | 95,804   | 95.0%                 | 5.0%   | 90,999                | 4,805  | 98,411   | 95.0%                 | 5.0%   | 93,476                | 4,935  |
|   |         |          |                       |        |                       |        |          |                       |        |                       |        |
| Automotive parts and accessories stores                           | 441310  | 31,532   | 36.0%                 | 64.0%  | 11,352                | 20,180 | 32,242   | 37.0%                 | 63.0%  | 11,930                | 20,313 |
| Tire dealers  | 441320  | 20,102   | 94.0%                 | 6.0%   | 18,896                | 1,206  | 20,558   | 94.0%                 | 6.0%   | 19,324                | 1,233  |
| Warehouse clubs and supercenters                                  | 452910  | 19,029   | 42.0%                 | 58.0%  | 7,992                 | 11,037 | 19,659   | 45.0%                 | 55.0%  | 8,846                 | 10,812 |
| Electronic shopping and mail-order houses                         | 4541    | 10,578   | 10.0%                 | 90.0%  | 1,058                 | 9,520  | 11,480   | 13.0%                 | 87.0%  | 1,492                 | 9,988  |
| Other gasoline stations   | 447190  | 4,726    | 90.0%                 | 10.0%  | 4,253                 | 473    | 4,837    | 90.0%                 | 10.0%  | 4,353                 | 484    |
| Gasoline stations with convenience stores                         | 447110  | 4,229    | 90.0%                 | 10.0%  | 3,806                 | 423    | 4,340    | 90.0%                 | 10.0%  | 3,906                 | 434    |
| Discount department stores  | 452112  | 2,520    | 51.0%                 | 49.0%  | 1,285                 | 1,235  | 2,572    | 51.0%                 | 49.0%  | 1,312                 | 1,260  |
| Wholesale trade   | 42      | 2,129    | 6.0%                  | 94.0%  | 128                   | 2,002  | 2,179    | 6.0%                  | 94.0%  | 131                   | 2,048  |
| All other general merchandise stores                              | 452990  | 1,386    | 1.0%                  | 99.0%  | 14                    | 1,373  | 1,417    | 1.0%                  | 99.0%  | 14                    | 1,403  |
| Fuel dealers  | 45431   | 913      | 0.0%                  | 100.0% | 0                     | 913    | 930      | 0.0%                  | 100.0% | 0                     | 930    |
| Lawn and garden equipment and supplies stores                     | 4442    | 364      | 0.0%                  | 100.0% | 0                     | 364    | 372      | 0.0%                  | 100.0% | 0                     | 372    |
| Hardware stores   | 444130  | 245      | 0.0%                  | 100.0% | 0                     | 245    | 251      | 0.0%                  | 100.0% | 0                     | 251    |
| Department stores (except discount department stores)             | 452111  | 150      | 0.0%                  | 100.0% | 0                     | 150    | 153      | 0.0%                  | 100.0% | 0                     | 153    |
| Supermarkets and other grocery (except convenience) stores        | 445110  | 124      | 0.0%                  | 100.0% | 0                     | 124    | 127      | 0.0%                  | 100.0% | 0                     | 127    |
| Electronics and appliance stores                                  | 4431    | 107      | 0.0%                  | 100.0% | 0                     | 107    | 109      | 0.0%                  | 100.0% | 0                     | 109    |
| Sporting goods stores   | 451110  | 92       | 0.0%                  | 100.0% | 0                     | 92     | 95       | 0.0%                  | 100.0% | 0                     | 95     |
| Convenience stores  | 445120  | 77       | 0.0%                  | 100.0% | 0                     | 77     | 79       | 0.0%                  | 100.0% | 0                     | 79     |
| Pharmacies and drug stores  | 446110  | 58       | 0.0%                  | 100.0% | 0                     | 58     | 59       | 0.0%                  | 100.0% | 0                     | 59     |
| All others (Incl. Home Centers 444110)                            | Various | 104      | 0.0%                  | 100.0% | 0                     | 104    | 106      | 0.0%                  | 100.0% | 0                     | 106    |
| Other building material dealers                                   | 444190  |          | 0.0%                  | 100.0% | 0                     | 0      |          | 0.0%                  | 100.0% | 0                     | 0      |
| Total Retail  |         | 98,466   | 49.5%                 | 50.5%  | 48,783                | 49,683 | 101,564  | 50.5%                 | 49.5%  | 51,309                | 50,256 |
|   |         |          |                       |        |                       |        |          |                       |        |                       |        |
| Total Independent Market  |         | 194,271  |                       |        |                       |        | 199,975  |                       |        |                       |        |
|   |         |          |                       |        |                       |        |          |                       |        |                       |        |
| New car dealers   | 441110  | 77,165   | 97.0%                 | 3.0%   | 74,827                | 2,338  | 79,985   | 97.0%                 | 3.0%   | 77,586                | 2,400  |
| Used car dealers  | 441120  | 2,061    | 100.0%                | 0.0%   | 2,061                 | 0      | 2,114    | 100.0%                | 0.0%   | 2,114                 | 0      |
| Other motor vehicle dealers                                       | 4412    | 3,640    | 97.0%                 | 3.0%   | 3,531                 | 109    | 3,728    | 97.0%                 | 3.0%   | 3,617                 | 112    |
| Total Dealer  |         | 82,866   | 97.0%                 | 3.0%   | 80,419                | 2,447  | 85,828   | 97.1%                 | 2.9%   | 83,316                | 2,511  |
|   |         |          |                       |        |                       |        |          |                       |        |                       |        |
| Total Auto Care Industry Sales                                    |         | 277,136  | 79%                   | 21%    | 220,200               | 56,936 | 285,803  | 80%                   | 20%    | 228,101               | 57,702 |
| Less Tires (Pass Cars and Lt. Trucks):                            |         |          |                       |        | 29,700                |        |          |                       |        | 30,600                |        |
| Net DIFM Sales without Tires                                      |         |          |                       |        | 190,500               |        |          |                       |        | 197,501               |        |

Notes: # Estimated \* Forecast (\*\*) Auto Parts and Accessories store sales include those sales to the general public.

Source: Auto Care Association / AASA Channel Forecast Model.

# Auto Care Segmentation

The automotive segment of the auto care industry includes replacement parts, accessories, chemicals, tires and non-warranty service for passenger cars and light trucks (i.e., pickup trucks, vans, minivans and sport utility vehicles). The professional service segment, the Do-It-For-Me (DIFM) segment consisting of the professional repair, maintenance and installation of automotive products at both independent aftermarket outlets and vehicle dealerships totaled \$228.1 billion (80 percent) of the total in 2017. The balance of the industry, the Do-It-Yourself (DIY) segment, is comprised of consumers who repair, maintain and accessorize their own vehicles, which totaled \$57.7 billion (20 percent) of the total \$285.8 billion industry in 2017.

## Auto Care Industry Segmentation (Values in Millions of Consumer Dollars)

|   | 2007 Census    | 2012 Census    | 2013#          | 2014#          | 2015#          | 2016#          | 2017#          | 2018*          | 5-Yr CAGR 2007-2012 | 5-Yr CAGR 2013-2018 |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------|---------------------|
| Auto Parts Share of DIFM Assumed to be 55% of Total Market  | 78,911         | 88,457         | 91,343         | 95,435         | 100,308        | 104,775        | 108,626        | 113,177        | 2.3%                | 4.4%                |
| Labor Share of DIFM Sales Assumed to be 45% of Total Market | 64,563         | 72,374         | 74,736         | 78,084         | 82,070         | 85,725         | 88,875         | 92,600         | 2.3%                | 4.4%                |
| Do-It-For-Me (DIFM) Sales                                   | 143,474        | 160,830        | 166,079        | 173,519        | 182,378        | 190,500        | 197,501        | 205,777        | 2.3%                | 4.4%                |
| Tire Sales  | 22,900         | 29,800         | 29,900         | 29,700         | 29,200         | 29,700         | 30,600         | 31,000         | 5.4%                | 0.7%                |
| Total DIFM Professional Sales                               | 166,374        | 190,630        | 195,979        | 203,219        | 211,578        | 220,200        | 228,101        | 236,777        | 2.8%                | 3.9%                |
| Do-It-Yourself (DIY) Sales                                  | 41,543         | 47,657         | 49,956         | 51,731         | 54,189         | 56,936         | 57,702         | 59,194         | 2.8%                | 3.5%                |
| <b>Total Automotive</b>                                     | <b>207,917</b> | <b>238,287</b> | <b>245,935</b> | <b>254,950</b> | <b>265,767</b> | <b>277,136</b> | <b>285,803</b> | <b>295,971</b> | <b>2.8%</b>         | <b>3.8%</b>         |
| <b>Market Share Summary:</b>                                |                |                |                |                |                |                |                |                |                     |                     |
| Total DIFM Professional Sales (Share)                       | 80%            | 80%            | 80%            | 80%            | 80%            | 79%            | 80%            | 80%            |                     |                     |
| Do-It-Yourself (DIY) Sales (Share)                          | 20%            | 20%            | 20%            | 20%            | 20%            | 21%            | 20%            | 20%            |                     |                     |
| <b>Total Automotive</b>                                     | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    |                     |                     |

Notes: \* Forecast # Estimate

Sources: Auto Care Association, Modern Tire Dealer

Totals may not add due to rounding. Historical data have been revised. Figures represent consumer expenditures in current retail dollars (i.e., inflation added) and do not include warranty work.

## Size of the Professional Service Parts Market (Values in Millions of Consumer Dollars)

|  | 2007 Census | 2012 Census | 2013#   | 2014#   | 2015#   | 2016#   | 2017#   | 2018*   | 5-Yr CAGR 2013-2018 |
|--|-------------|-------------|---------|---------|---------|---------|---------|---------|---------------------|
| Professional Service Receipts (DIFM)                       | 143,474     | 160,830     | 166,079 | 173,519 | 182,378 | 190,500 | 197,501 | 205,777 | 4.4%                |
| Parts' Share of Professional Service Receipts (estimate)   | 55%         | 55%         | 55%     | 55%     | 55%     | 55%     | 55%     | 55%     |                     |
| Value of Parts Sales to DIFM Customers at Retail Prices    | 78,911      | 88,457      | 91,343  | 95,435  | 100,308 | 104,775 | 108,626 | 113,177 | 4.4%                |
| Wholesale Share of DIFM Parts Sales (estimate)             | 67%         | 67%         | 67%     | 67%     | 67%     | 67%     | 67%     | 67%     |                     |
| Value of Parts Sales to DIFM Customers at Wholesale Prices | 52,870      | 59,266      | 61,200  | 63,942  | 67,206  | 70,199  | 72,779  | 75,829  | 4.4%                |

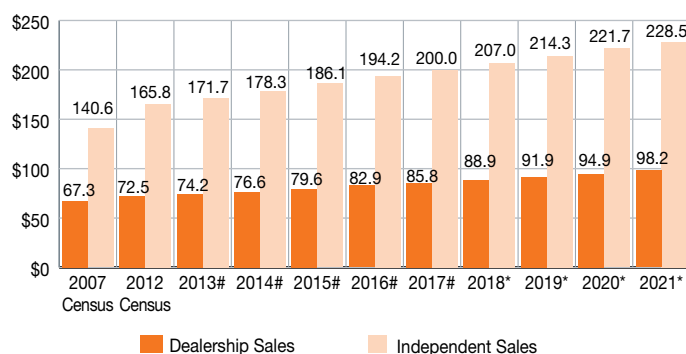
Notes: \* Forecast # Estimate

Sources: Auto Care Association, Modern Tire Dealer

Data includes the sale of parts, chemicals and accessories.

## Dealership vs. Independent Auto Care Parts and Service Sales, 2007-2021\*

(Value in Billions of Consumer Dollars)

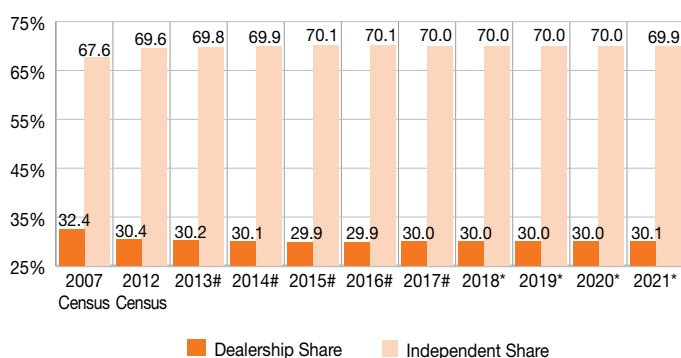


Notes: \* Forecast # Estimate

Source: Auto Care Association/AASA Channel Forecast Model

## Dealership vs. Independent Share of Auto Care Parts and Service Sales, 2007-2021\*

(Percent Share & Outlet Trends)



Notes: \* Forecast # Estimate

Source: Auto Care Association/AASA Channel Forecast Model

# Auto Care Service and Retail Outlets

Traditionally, auto care parts, accessories and chemicals have moved through dedicated channels of distribution along DIY (do-it-yourself) and DIFM (do-it-for-me) channels. DIY retail consumers installed or consumed products purchased in retail outlets or over-the-counter at parts stores. DIFM consumers either go straight to a professional automotive technician, purchasing the “job,” in which they also entrust their technician to select and purchase their part or products. In some cases, DIFM parts and products may be specified directly by the consumer for installation by a professional.

Consolidation continues to reduce the number of service outlets at a slow, steady rate. This is reflected in the 3.7 percent decrease in the compounded annual growth rate of specialty repair shops. Over the past decade, a large number of specialty repair shops have been consolidated into the general repair category, which has grown by 0.7 percent annually. Another significant change in service channel outlets is the decline in the number of motor vehicle dealers, down 2.2 percent CAGR during the 2009 to 2017 period. On the other hand, since 2009 the tire dealers category has grown by 1 percent annually, compared with the rest of the service sectors, which have remained unchanged, over the same period.

Demands on American consumers’ time have driven changes in the servicing sector. Service customers now look to get in and out quickly and accomplish the most they can at every stop, resulting in consolidation of specialized shops into larger, general repair centers catering to time-pressured consumers seeking “one-stop shops.” Many general repair centers are also evolving beyond fast and varied services, to offering value-added customer amenities like upgraded waiting lounges, wifi, commuter shuttles and no-cost service loaner-cars.

Within the retail channel, convenience has also become a driver. Drug store outlets, discount stores and warehouse clubs have seemingly sprung up on every corner, growing annually at 2.3, 3.1 and 3.6 percent, respectively. The auto parts store, which is the industry’s source for auto parts and consumables, remains remarkably stable in outlet representation. Considering the widespread consolidation of auto parts retailers in the past decade, the number of outlets has been gradually moving towards 37,000 outlets, many of which have been rebranded and upgraded over the past ten years.

## Industry Service Channel Outlets

| Outlet Type                                   | 2009           | 2010           | 2011           | 2012           | 2013           | 2014           | 2015           | 2016           | 2017*          | CAGR 2009/2017 |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Motor Vehicle Dealers <sup>1</sup>            | 20,010         | 18,460         | 17,700         | 17,540         | 17,635         | 16,396         | 16,545         | 16,708         | 16,812         | -2.2%          |
| General Repair Garages <sup>2</sup>           | 75,637         | 76,108         | 76,731         | 77,561         | 78,354         | 79,240         | 79,500         | 80,066         | 80,240         | 0.7%           |
| Tire Dealers                                  | 18,547         | 18,675         | 18,980         | 19,470         | 19,759         | 19,931         | 19,818         | 19,863         | 20,013         | 1.0%           |
| Specialty Repair Shops <sup>2</sup>           | 9,149          | 8,663          | 8,415          | 8,101          | 7,785          | 7,534          | 7,322          | 7,001          | 6,760          | -3.7%          |
| Gasoline Stations <sup>2</sup>                | 104,400        | 103,768        | 104,011        | 104,837        | 104,855        | 104,688        | 104,961        | 104,887        | 105,482        | 0.1%           |
| Oil Change and Lubrication Shops <sup>2</sup> | 7,501          | 7,518          | 7,490          | 7,427          | 7,430          | 7,368          | 7,354          | 7,449          | 7,367          | -0.2%          |
| Independent Body Shops <sup>2</sup>           | 35,193         | 34,764         | 34,358         | 34,437         | 34,344         | 34,381         | 34,510         | 34,654         | 34,629         | -0.2%          |
| <b>Total Number of Outlets</b>                | <b>270,437</b> | <b>267,956</b> | <b>267,685</b> | <b>269,373</b> | <b>270,162</b> | <b>269,538</b> | <b>270,010</b> | <b>270,628</b> | <b>271,304</b> | <b>0.0%</b>    |

Notes: \* Preliminary Historical data have been revised.

Some channels listed in the “Industry Retail Channels” table include outlets that also perform automotive service.

Sources: <sup>1</sup> NADA Industry Analysis Division <sup>2</sup> Bureau of Labor Statistics

## Industry Retail Channel Outlets

| Outlet Type                      | 2009           | 2010           | 2011           | 2012           | 2013           | 2014           | 2015           | 2016           | 2017*          | CAGR 2009/2017 |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Auto Parts Stores                | 35,708         | 35,409         | 35,583         | 35,702         | 36,065         | 36,444         | 36,453         | 36,622         | 36,889         | 0.4%           |
| Department Stores                | 4,936          | 4,852          | 4,906          | 4,894          | 4,839          | 4,758          | 4,683          | 4,665          | 4,647          | -0.8%          |
| Discount Stores                  | 8,164          | 8,249          | 9,351          | 9,380          | 9,299          | 10,188         | 10,481         | 10,437         | 10,389         | 3.1%           |
| Hardware Stores and Home Centers | 26,770         | 26,434         | 25,527         | 25,097         | 24,707         | 24,522         | 24,262         | 24,423         | 24,176         | -1.3%          |
| Grocery and Convenience Stores   | 111,455        | 113,508        | 115,027        | 116,328        | 117,851        | 119,014        | 119,054        | 119,324        | 119,351        | 0.9%           |
| Drug Stores                      | 52,918         | 54,471         | 54,709         | 56,411         | 61,064         | 62,300         | 62,916         | 63,697         | 63,305         | 2.3%           |
| Warehouse Clubs                  | 4,669          | 4,662          | 4,828          | 4,992          | 5,652          | 5,827          | 5,972          | 6,073          | 6,176          | 3.6%           |
| <b>Total Number of Outlets</b>   | <b>244,620</b> | <b>247,585</b> | <b>249,931</b> | <b>252,804</b> | <b>259,477</b> | <b>263,053</b> | <b>263,821</b> | <b>265,241</b> | <b>264,933</b> | <b>1.0%</b>    |

Notes: \* Preliminary Historical data have been revised.

Not all department, hardware, home center, grocery, convenience, drug and warehouse club stores sell automotive products.

Sources: Auto Care Association, Bureau of Labor Statistics



# Auto Care Service and Retail Outlet Analysis

Combining channel sales reported on pages 13 and 14 with the number of outlets presented on page 16, average sales per outlets have been calculated. Compounded average annual growth rates (CAGRs) from 2012 to 2017 are presented in the tables below.

The resulting 5-year CAGRs for all types of outlets are as follows: New Car Dealers (4.5 percent), Oil change and Lubrication Shops (3.7 percent), General Repair Shops (2.8 percent), Automotive Independent Body Shops (2.7 percent) and Auto Parts and Accessory Stores (2.6 percent),

## Motor Vehicle Dealers

| Year        | Sales<br>(NAICS 441110) | No. of<br>Outlets | Avg. Sales<br>Per Vehicle<br>Dealer | YOY<br>Change |
|-------------|-------------------------|-------------------|-------------------------------------|---------------|
| 2012        | \$67,026,000,000        | 17,540            | \$3,821,323                         | Base Year     |
| 2013        | \$68,713,000,000        | 17,635            | \$3,896,399                         | 2.0%          |
| 2014        | \$71,014,000,000        | 16,396            | \$4,331,178                         | 11.2%         |
| 2015        | \$73,943,000,000        | 16,545            | \$4,469,205                         | 3.2%          |
| 2016        | \$77,165,000,000        | 16,708            | \$4,618,446                         | 3.3%          |
| 2017        | \$79,985,000,000        | 16,812            | \$4,757,614                         | 3.0%          |
| 5-year CAGR |                         |                   | 4.5%                                |               |

## Oil Change and Lubrication Shops

| Year        | Sales<br>(NAICS 811191) | No. of<br>Outlets | Avg. Sales<br>Per Oil &<br>Lube Shop | YOY<br>Change |
|-------------|-------------------------|-------------------|--------------------------------------|---------------|
| 2012        | \$5,078,000,000         | 7,427             | \$683,722                            | Base Year     |
| 2013        | \$5,220,000,000         | 7,430             | \$702,557                            | 2.8%          |
| 2014        | \$5,391,000,000         | 7,368             | \$731,678                            | 4.1%          |
| 2015        | \$5,599,000,000         | 7,354             | \$761,354                            | 4.1%          |
| 2016        | \$5,879,000,000         | 7,449             | \$789,233                            | 3.7%          |
| 2017        | \$6,050,000,000         | 7,367             | \$821,230                            | 4.1%          |
| 5-year CAGR |                         |                   | 3.7%                                 |               |

## General Repair Garages

| Year        | Sales<br>(NAICS 811111) | No. of<br>Outlets | Avg. Sales<br>Per Gen.<br>Rep. Garage | YOY<br>Change |
|-------------|-------------------------|-------------------|---------------------------------------|---------------|
| 2012        | \$34,957,000,000        | 77,561            | \$450,703                             | Base Year     |
| 2013        | \$35,905,000,000        | 78,354            | \$458,241                             | 1.7%          |
| 2014        | \$36,987,000,000        | 79,240            | \$466,772                             | 1.9%          |
| 2015        | \$38,681,000,000        | 79,500            | \$486,553                             | 4.2%          |
| 2016        | \$40,469,000,000        | 80,071            | \$505,414                             | 3.9%          |
| 2017        | \$41,556,000,000        | 80,240            | \$517,896                             | 2.5%          |
| 5-year CAGR |                         |                   | 2.8%                                  |               |

## Automotive Independent Body Shops

| Year        | Sales<br>(NAICS 811121) | No. of<br>Outlets | Avg. Sales<br>Per Body<br>Shop | YOY<br>Change |
|-------------|-------------------------|-------------------|--------------------------------|---------------|
| 2012        | \$27,912,000,000        | 34,437            | \$810,524                      | Base Year     |
| 2013        | \$28,616,000,000        | 34,344            | \$833,217                      | 2.8%          |
| 2014        | \$29,394,000,000        | 34,381            | \$854,949                      | 2.6%          |
| 2015        | \$30,299,000,000        | 34,510            | \$877,977                      | 2.7%          |
| 2016        | \$31,336,000,000        | 34,654            | \$904,253                      | 3.0%          |
| 2017        | \$32,140,000,000        | 34,629            | \$928,124                      | 2.6%          |
| 5-year CAGR |                         |                   | 2.7%                           |               |

## Auto Parts & Accessories Stores

| Year        | Sales (*)<br>(NAICS 441310) | No. of<br>Outlets | Avg. Sales<br>Per Auto<br>Parts Store | YOY<br>Change |
|-------------|-----------------------------|-------------------|---------------------------------------|---------------|
| 2012        | \$27,473,000,000            | 35,702            | \$769,509                             | Base Year     |
| 2013        | \$28,304,000,000            | 36,065            | \$784,805                             | 2.0%          |
| 2014        | \$29,340,000,000            | 36,444            | \$805,071                             | 2.6%          |
| 2015        | \$30,437,000,000            | 36,453            | \$834,966                             | 3.7%          |
| 2016        | \$31,532,000,000            | 36,622            | \$861,013                             | 3.1%          |
| 2017        | \$32,242,000,000            | 36,889            | \$874,027                             | 1.5%          |
| 5-year CAGR |                             |                   | 2.6%                                  |               |

Note: (\*) Auto Parts and Accessories Store sales include only those sales to the general public.

# Program Distribution Overview

## AIM

[theaimautomotivegroup.com](http://theaimautomotivegroup.com)

**General Manager**  
Bill McConnell

**Private Label**  
AIM

**Stores serviced**  
2,144

## Pep Boys/Auto Plus

[autoplusap.com](http://autoplusap.com)  
[pepboys.com](http://pepboys.com)

**Association President/CEO**  
Daniel Ninivaggi

**Stores serviced**  
1,069 corporate locations  
(27 distribution centers  
264 Auto Plus stores  
561 Pep Boys Supercenters  
5 Pep Boys retail-only locations  
239 Pep Boys Service & Tire Centers  
Also supports:  
530 independently owned stores  
2,400 independently owned service centers)

**Private Label**  
Auto Xtra  
Pro

## Aftermarket Auto Parts Alliance

[AutoValue.com](http://AutoValue.com)  
[BumpertoBumper.com](http://BumpertoBumper.com)

**Association President/CEO**  
John Washbush

**Stores serviced**  
2,000+

**Private Label**  
Parts Master

## APA - Automotive Parts Associates

[professionalschoice.com](http://professionalschoice.com)

**Chairman of the Board**  
Douglas Squires

**Stores serviced**  
2,000+

**Private Label**  
Professionals' Choice Auto Parts

## Automotive Distribution Network — Parts Plus, IAPA, Auto Pride

[networkhq.org](http://networkhq.org)

**Association President/CEO**  
David Prater

**Stores serviced**  
More than 1,500+ affiliated parts stores;  
2,000+ affiliated service centers

**Private Label**  
Parts Plus, Auto Pride, Auto Saver,  
Auto Star, Trustar

## Advance Professional

[pro.advancecommercial.com](http://pro.advancecommercial.com)  
[carquest.com](http://carquest.com)  
[autopartintl.com](http://autopartintl.com)

**Executive Vice President**  
Bob Cushing

**Stores serviced**  
6,500  
127 Worldpac branches  
1,250 independently owned Carquest-branded stores  
180 Autopart International stores

**Private Label**  
CARQUEST, CARQUESTWEAREVER  
DRIVEWORKS, TOUGHONE, Autopart International

## Engine Pro/Engine Parts Group

[enginepro.com](http://enginepro.com)

**Chairman of the Board**  
Paul Van Woensel

**Stores serviced**  
16,000+

**Private Label**  
Engine Pro/Engine Pro Performance

## Federated Auto Parts

[federatedautoparts.com](http://federatedautoparts.com)

**Association President/CEO**  
Rusty Bishop

**Stores serviced**  
3,000+

**Private Label**  
Federated

## HDA Truck Pride

[hdatruckpride.com](http://hdatruckpride.com)

**Association President/CEO**  
Don Reimondo

**Stores serviced**  
700+ distribution locations,  
400+ service facilities

**Private/Public Ownership**  
Private

**Private Label**  
n/a

## NAPA

[NAPAonline.com](http://NAPAonline.com)

**Association President/CEO**  
Dan Askey

**Stores serviced**  
6,000+

**Private Label**  
NAPA

## National Pronto Association

[pronto-net.com](http://pronto-net.com)

**Association President/CEO**  
Bill Maggs

**Stores serviced**  
4,000+

**Private Label**  
PRONTO

## TruStar

[trustarinc.com](http://trustarinc.com)

**Association President/CEO**  
Steve Upton

**Stores serviced**  
250+ independent automotive warehouse distributors

**Private Label**  
TruStar

# Retail Stores Overview

## 1. AutoZone

**Affiliation Group**  
None

**Store Count**  
5,806

**Private/Public Ownership**  
NYSE— "AZO"

**Private Label**  
Duralast

## 2. Advance Auto Parts

**Affiliation Group**  
None

**Store Count**  
5,189  
127 Worldpac branches  
1,250 independently owned Carquest-branded stores

**Private/Public Ownership**  
NYSE— "AAP"

## 3. O'Reilly

**Affiliation Group**  
Parts City

**Store Count**  
4,829

**Private/Public Ownership**  
NASDAQ— "ORLY"

**Private Label**  
Several exclusive to O'Reilly

## 4. Genuine Parts Co.

**Affiliation Group**  
NAPA

**Store Count**  
1,368

**Private/Public Ownership**  
NYSE— "GPC"

**Private Label**  
NAPA

## 5. Pep Boys/Auto Plus

**Affiliation Group**  
None

**Store Count**  
1,069 corporate locations  
(27 distribution centers  
264 Auto Plus stores  
561 Pep Boys Supercenters  
5 Pep Boys retail-only locations  
239 Pep Boys Service & Tire Centers  
Also supports:  
530 independently owned stores  
2,400 independently owned service centers)

**Private/Public Ownership**  
Icahn Automotive Group

## 6. Fisher Auto Parts

**Affiliation Group**  
Federated

**Store Count**  
500  
Plus more than 110 independent jobbers

**Private/Public Ownership**  
Private

**Private Label**  
Federated

## 7. Auto-Wares

**Affiliation Group**  
Aftermarket Auto Parts Alliance

**Store Count**  
More than 300 corporate and independently owned stores

**Private/Public Ownership**  
Private

**Private Label**  
PartsMaster

## 8. Replacement Parts Inc.

**Affiliation Group**  
Aftermarket Auto Parts Alliance

**Store Count**  
177

**Private/Public Ownership**  
Private/ESOP

**Private Label**  
PartsMaster

## 9. Automotive Parts Headquarters

**Affiliation Group**  
Aftermarket Auto Parts Alliance

**Store Count**  
124

**Private/Public Ownership**  
Private

**Private Label**  
PartsMaster

## 10. Hahn Automotive

**Affiliation Group**  
Aftermarket Auto Parts Alliance

**Store Count**  
94

**Private/Public Ownership**  
Private

**Private Label**  
PartsMaster

## 11. Arnold Motor Supply

**Affiliation Group**  
Aftermarket Auto Parts Alliance

**Store Count**  
58 company stores, more than 60 independent Auto Value and non-aligned jobbers

**Private/Public Ownership**  
Private

**Private Label**  
PartsMaster

## 12. XL Parts

**Affiliation Group**  
National Pronto Association

**Store Count**  
73

**Private/Public Ownership**  
Private

**Private Label**  
PRONTO



## Did you know?

90%

of new cars (by 2020) will transmit real-time information about the owner's driving behavior and the vehicle's condition.

80%

of car owners think that they should have control over their data.

93%

of auto industry employees think car owners should control their own data.

90%

of car owners think they could save more money by visiting an independent repair shop.



The **Your Car. Your Data. Your Choice.** campaign represents the interests of individual car owners, and the independent repair shops and auto parts stores that serve them. We believe car owners should have the right to access and control their own vehicle data. We're fighting to put car data back where it belongs — in the hands of car owners.

### IT'S TIME TO TAKE ACTION.

If you're a member of our industry, learn more about the campaign and take the pledge to get involved today!

[autocare.org/telematics](http://autocare.org/telematics)





# Financial Benchmarks

in this section

## **Financial Profiles of Selected Auto Care Companies**

Key financial statistics for selected auto care companies

## **Select Auto Care Transactions**

Merger and acquisition data for auto care manufacturers, wholesalers and retailers

# Financial Profiles of Select Auto Care Companies

## Automotive Aftermarket

### JEFFERIES GLOBAL AUTOMOTIVE AFTERMARKET REVIEW

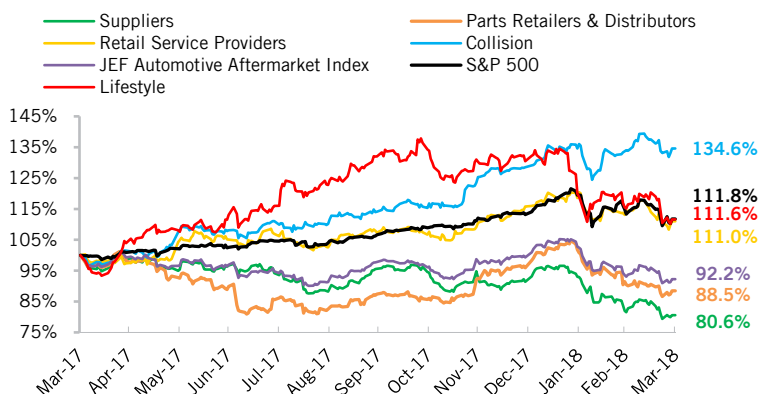
March 31, 2018

#### Twelve Month Price Performance

| Automotive Aftermarket Equity Index Returns |         |         |
|---|---------|---------|
|   | Q1-2018 | LTM     |
| S&P 500                                     | (1.2%)  | 11.8%   |
| JEF Automotive Aftermarket Index            | (6.0%)  | (7.8%)  |
| Suppliers                                   | (11.8%) | (19.4%) |
| Parts Retailers & Distributors              | (7.7%)  | (11.5%) |
| Retail Service Providers                    | (4.1%)  | 11.0%   |
| Collision                                   | 4.7%    | 34.6%   |
| Lifestyle                                   | (14.4%) | 11.6%   |

Source: Capital IQ

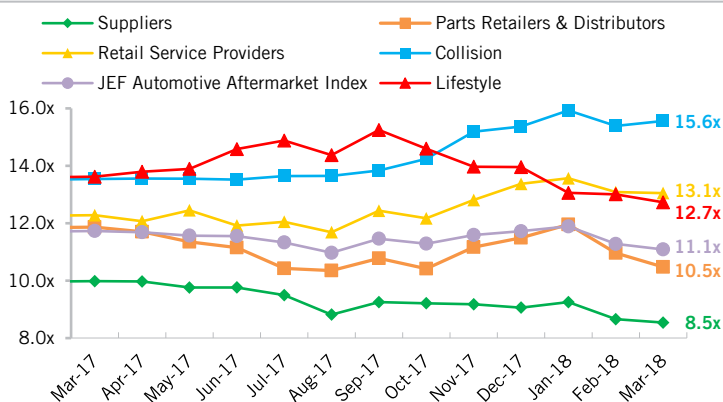
Suppliers: AXTA, CTB, DORM, GT, HZN, MPAA, SMP, SNA, VVV; Parts Retailers & Distributors: AAP, AZO, GPC, LKQ, ORLY, PRTS, SNA, UNS; Retail Service Providers: BYD.UN; MNRO, VVV; Collision: BYD.UN, CPRT, KAR, LKQ; Lifestyle: FOXF, PII



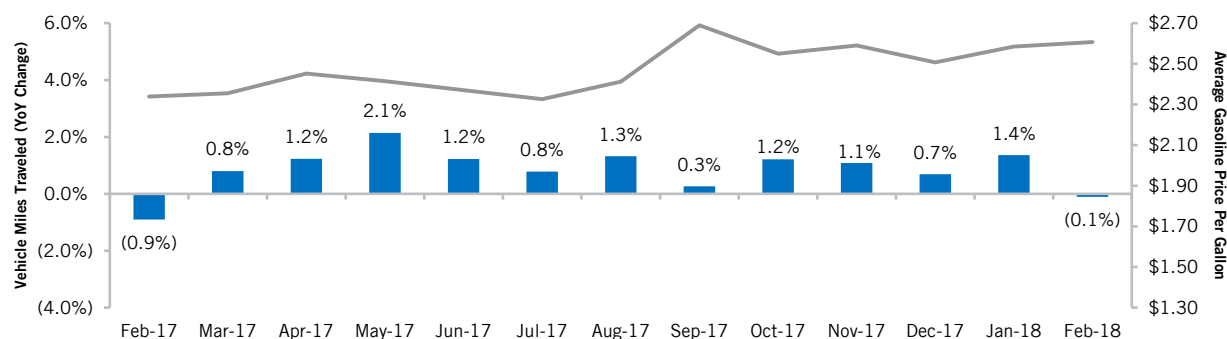
#### LTM Trading Multiples (EV / LTM EBITDA)

| Automotive Aftermarket Trading Multiples |           |            |
|--|-----------|------------|
|  | 3/31/2018 | 1 Year Ago |
| JEF Automotive Aftermarket Index         | 11.1x     | 11.7x      |
| Suppliers                                | 8.5x      | 10.0x      |
| Parts Retailers & Distributors           | 10.5x     | 11.9x      |
| Retail Service Providers                 | 13.1x     | 12.3x      |
| Collision                                | 15.6x     | 13.5x      |
| Lifestyle                                | 12.7x     | 13.6x      |

Source: Capital IQ



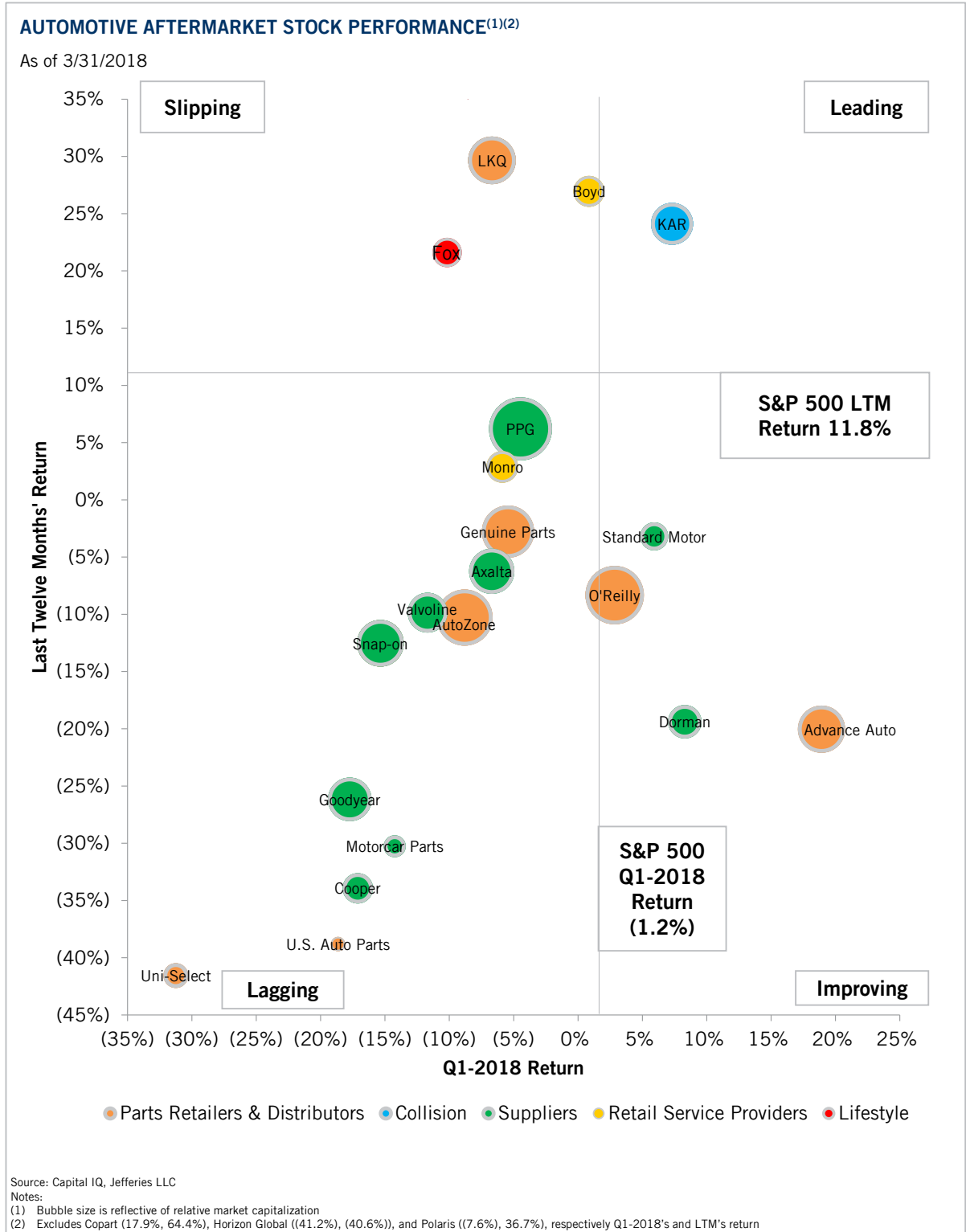
#### U.S. MILES TRAVELED AND AVERAGE GASOLINE PRICE PER GALLON



Source:  
Miles Traveled – U.S. Department of Transportation  
Gas Prices – U.S. Energy Information Administration

# Financial Profiles of Select Auto Care Companies

## Automotive Aftermarket Stock Performance

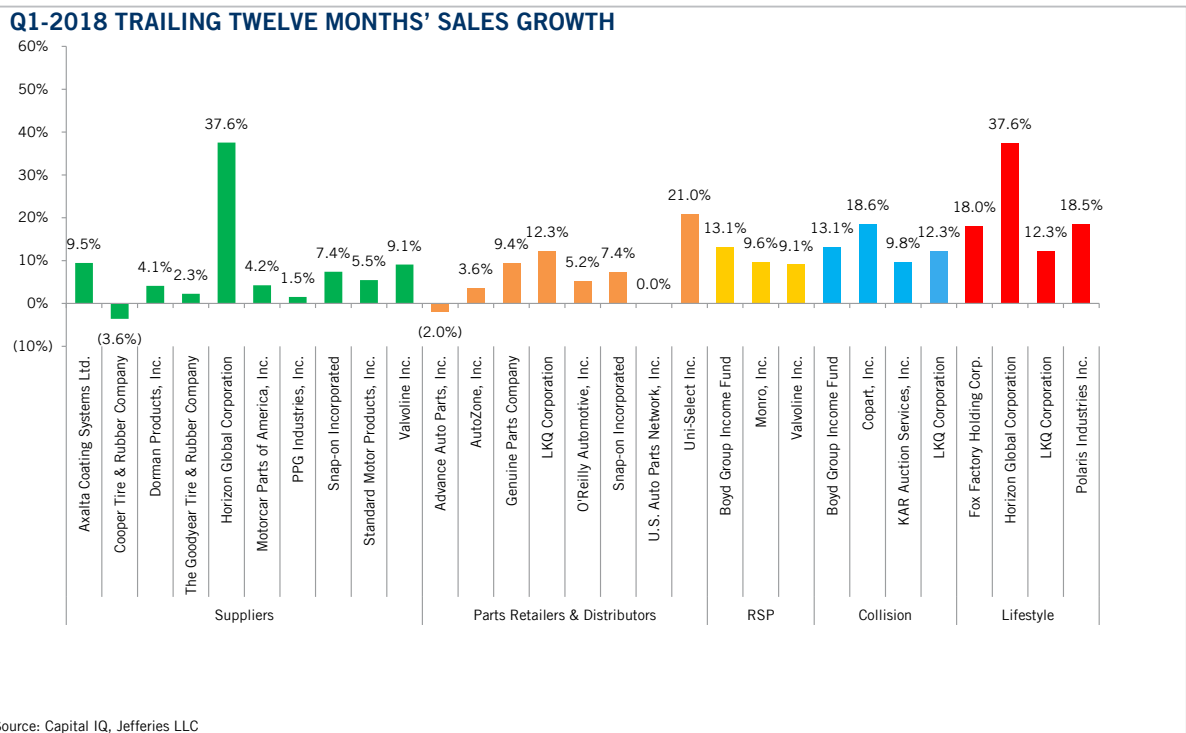
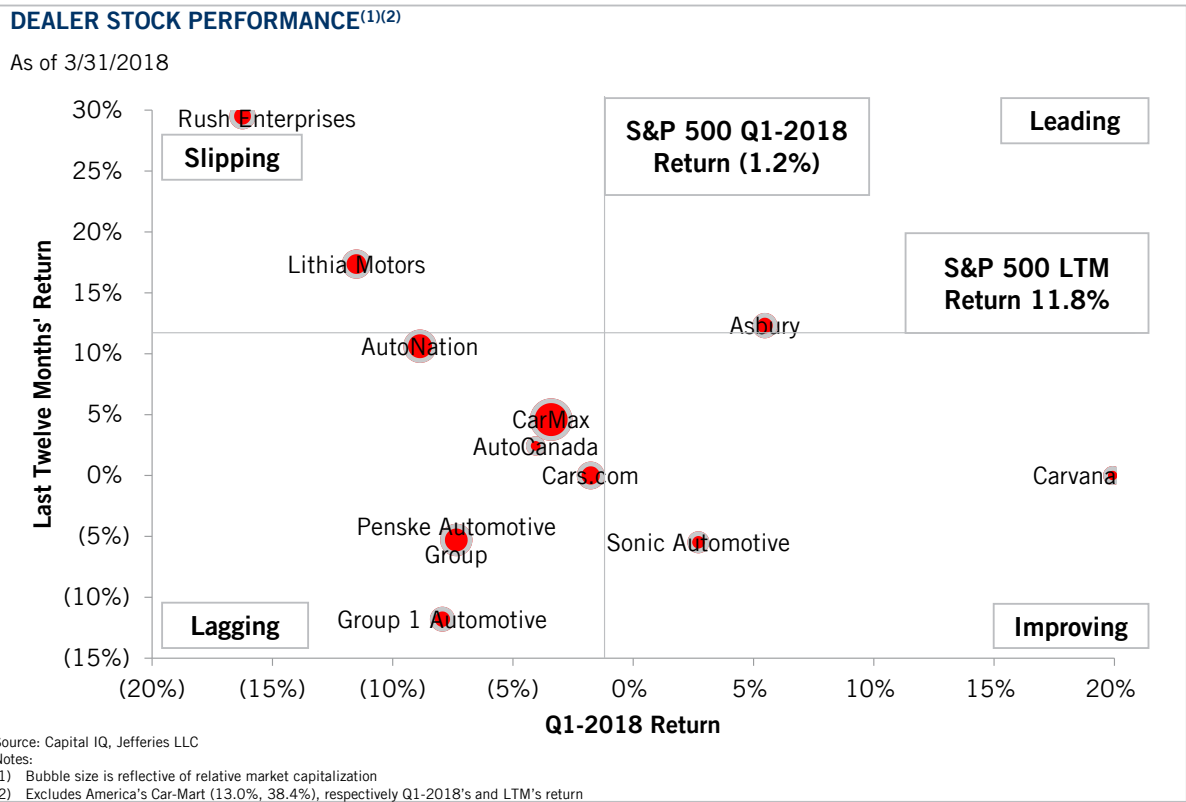


Automotive Aftermarket | March 31, 2018

Jefferies.com

# Financial Profiles of Select Auto Care Companies

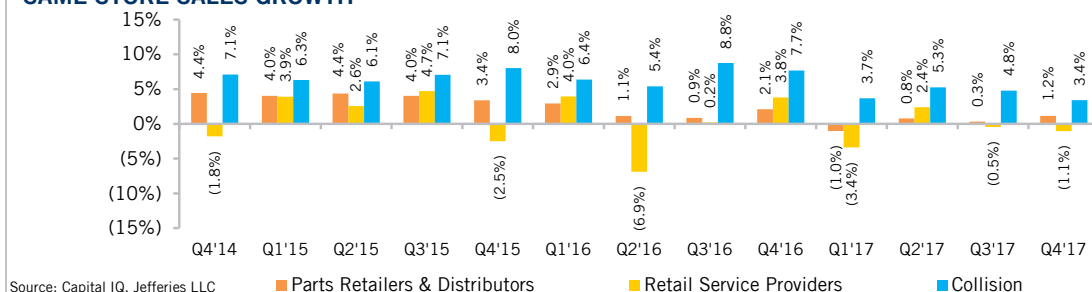
## Automotive Aftermarket Stock Performance (Cont.)



# Financial Profiles of Select Auto Care Companies

## Automotive Aftermarket Industry Fundamentals

### SAME STORE SALES GROWTH<sup>(1)(2)(3)</sup>



Source: Capital IQ, Jefferies LLC

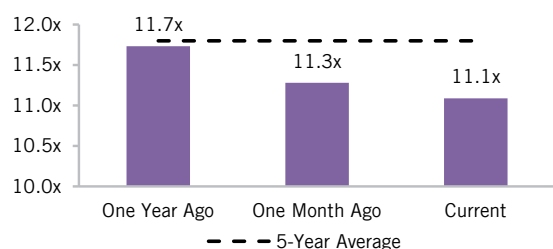
Notes:

- (1) Same Store Sales Growth reflective of aftermarket applicable sales
- (2) See operating results section (further herein) for breakout of Same Store Sales figures by index component
- (3) Same Store Sales measures revenue growth for stores that have been open for at least one year

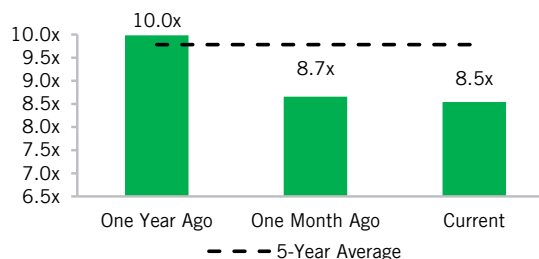
### ENTERPRISE VALUE / LAST 12 MONTHS' EBITDA MULTIPLES<sup>(1)(2)(3)(4)(5)</sup>

As of 3/31/2018

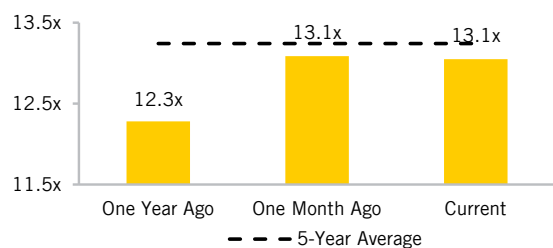
#### Jefferies Automotive Aftermarket Index



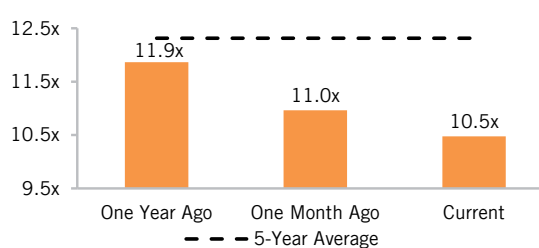
#### Suppliers



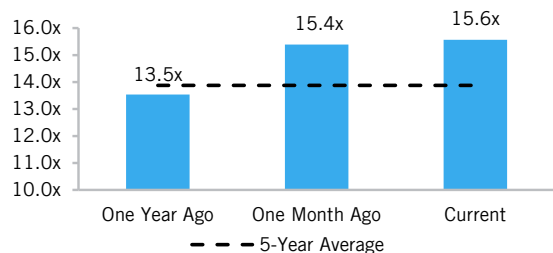
#### Retail Service Providers



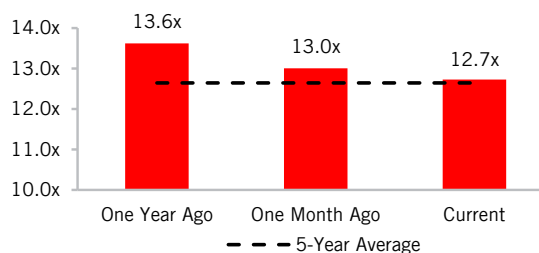
#### Parts Retailers & Distributors



#### Collision



#### Lifestyle



Source: Capital IQ, Jefferies LLC

Notes:

- (1) Enterprise Value = Market Capitalization + Debt - Cash; EBITDA = Earnings Before Interest, Taxes, Depreciation, and Amortization
- (2) LKQ is included in both Parts Retailers & Distributors and Collision
- (3) BYD.UN is included in both Retail Service Providers and Collision
- (4) VVV is included in both Suppliers and Retail Service Providers
- (5) SNA is included in both Suppliers and Parts Retailers & Distributors

Automotive Aftermarket | March 31, 2018

Jefferies.com



# Financial Profiles of Select Auto Care Companies

## North American Public Aftermarket Companies – Valuation Metrics

### PUBLIC AFTERMARKET COMPANIES – VALUATION METRICS<sup>(1)(2)</sup>

As of 3/31/2018

(\$ in millions, except per share)

| Company                         | Ticker | Price<br>as of<br>3/31/2018 | % of<br>52-Week<br>High | Equity<br>Value | TEV       | TEV /<br>EBITDA |       |       | Price /<br>Earnings |       |       | Net Debt<br>/ LTM<br>EBITDA | Q1-2018<br>Stock Price<br>Performance |             |       |
|---------------------------------|--------|-----------------------------|-------------------------|-----------------|-----------|-----------------|-------|-------|---------------------|-------|-------|-----------------------------|---------------------------------------|-------------|-------|
|                                 |        |                             |                         |                 |           | LTM             | 2018E | 2019E | LTM                 | 2018E | 2019E |                             |                                       |             |       |
| SUPPLIERS                       |        |                             |                         |                 |           |                 |       |       |                     |       |       |                             |                                       |             |       |
| Axalta Coating Systems Ltd.     | AXTA   | \$ 30.19                    | 79.0%                   | \$ 7,400        | \$ 10,680 | 12.4x           | 11.0x | 10.4x | 34.3x               | 22.7x | 19.4x | 3.9x                        | (6.7%)                                | <div></div> | -     |
| Cooper Tire & Rubber Company    | CTB    | 29.30                       | 65.8%                   | 1,491           | 1,514     | 3.8x            | 3.8x  | 3.6x  | 10.7x               | 9.6x  | 8.3x  | 0.3x                        | (17.1%)                               | <div></div> | -     |
| Dorman Products, Inc.           | DORM   | 66.21                       | 74.8%                   | 2,213           | 2,141     | 10.7x           | 10.2x | 9.5x  | 20.2x               | 15.7x | 14.2x | NM                          | -                                     | <div></div> | 8.3%  |
| Goodyear Tire & Rubber          | GT     | 26.58                       | 72.3%                   | 6,392           | 11,325    | 5.5x            | 4.6x  | 4.3x  | 11.3x               | 7.2x  | 6.1x  | 2.6x                        | (17.7%)                               | <div></div> | -     |
| Horizon Global Corporation      | HZN    | 8.24                        | 42.8%                   | 206             | 451       | 7.2x            | 5.7x  | 5.0x  | 22.9x               | 7.8x  | 7.1x  | 3.9x                        | (41.2%)                               | <div></div> | -     |
| Motorcar Parts of America, Inc. | MPAA   | 21.43                       | 67.9%                   | 409             | 450       | 7.5x            | 5.1x  | 4.8x  | 15.8x               | 8.7x  | 8.4x  | 0.7x                        | (14.2%)                               | <div></div> | -     |
| PPG Industries, Inc.            | PPG    | 111.60                      | 91.4%                   | 27,824          | 30,590    | 12.2x           | 11.3x | 10.7x | 23.2x               | 17.1x | 15.3x | 1.1x                        | (4.5%)                                | <div></div> | -     |
| Snap-on Incorporated            | SNA    | 147.54                      | 79.5%                   | 8,367           | 9,498     | 9.3x            | 8.9x  | 8.3x  | 15.7x               | 12.7x | 11.7x | 1.0x                        | (15.4%)                               | <div></div> | -     |
| Standard Motor Products, Inc.   | SMP    | 47.57                       | 86.9%                   | 1,076           | 1,120     | 7.5x            | 8.4x  | 7.8x  | 16.8x               | 14.2x | 12.3x | 0.3x                        | -                                     | <div></div> | 5.9%  |
| Valvoline Inc.                  | VV     | \$ 22.13                    | 86.3%                   | \$ 4,427        | \$ 5,478  | 9.8x            | 11.0x | 10.6x | 14.9x               | 15.8x | 14.1x | 1.9x                        | (11.7%)                               | <div></div> | -     |
| Mean                            |        |                             |                         |                 |           | 8.6x            | 8.0x  | 7.5x  | 18.6x               | 13.2x | 11.7x | 1.7x                        |                                       |             |       |
| Median                          |        |                             |                         |                 |           | 8.4x            | 8.6x  | 8.0x  | 16.3x               | 13.5x | 12.0x | 1.1x                        |                                       |             |       |
| PARTS RETAILERS & DISTRIBUTORS  |        |                             |                         |                 |           |                 |       |       |                     |       |       |                             |                                       |             |       |
| Advance Auto Parts, Inc.        | AAP    | \$ 118.55                   | 78.1%                   | \$ 8,770        | \$ 9,268  | 10.2x           | 9.6x  | 8.8x  | 23.0x               | 17.7x | 15.6x | 0.5x                        | -                                     | <div></div> | 18.9% |
| AutoZone, Inc.                  | AZO    | 648.69                      | 81.3%                   | 17,450          | 22,173    | 9.3x            | 9.0x  | 9.0x  | 15.3x               | 12.7x | 11.2x | 2.0x                        | (8.8%)                                | <div></div> | -     |
| Genuine Parts Company           | GPC    | 89.84                       | 83.4%                   | 13,183          | 16,220    | 12.7x           | 11.2x | 10.7x | 20.0x               | 15.7x | 14.8x | 2.3x                        | (5.4%)                                | <div></div> | -     |
| LKQ Corporation                 | LKQ    | 37.95                       | 86.5%                   | 11,750          | 14,944    | 13.5x           | 11.9x | 11.1x | 23.9x               | 16.1x | 14.7x | 2.8x                        | (6.7%)                                | <div></div> | -     |
| O'Reilly Automotive, Inc.       | ORLY   | 247.38                      | 88.6%                   | 20,607          | 23,539    | 11.8x           | 11.6x | 10.9x | 20.8x               | 16.0x | 14.4x | 1.6x                        | -                                     | <div></div> | 2.8%  |
| Snap-on Incorporated            | SNA    | 147.54                      | 79.5%                   | 8,367           | 9,498     | 9.3x            | 8.9x  | 8.3x  | 15.7x               | 12.7x | 11.7x | 1.0x                        | (15.4%)                               | <div></div> | -     |
| U.S. Auto Parts Network, Inc.   | PTS    | 2.05                        | 49.6%                   | 71              | 78        | 6.9x            | 5.2x  | 4.6x  | 41.0x               | 29.3x | 20.5x | 0.6x                        | (18.7%)                               | <div></div> | -     |
| Uni-Select Inc.                 | UNS    | \$ 15.51                    | 54.0%                   | \$ 656          | \$ 1,043  | 9.1x            | 7.7x  | 7.3x  | 14.1x               | 10.6x | 9.8x  | 3.5x                        | (31.3%)                               | <div></div> | -     |
| Mean                            |        |                             |                         |                 |           | 10.4x           | 9.4x  | 8.8x  | 21.7x               | 16.4x | 14.1x | 1.8x                        |                                       |             |       |
| Median                          |        |                             |                         |                 |           | 9.8x            | 9.3x  | 8.9x  | 20.4x               | 15.9x | 14.5x | 1.8x                        |                                       |             |       |
| RETAIL SERVICE PROVIDERS        |        |                             |                         |                 |           |                 |       |       |                     |       |       |                             |                                       |             |       |
| Boyd Group Income Fund          | BYD.UN | \$ 80.79                    | 93.0%                   | \$ 1,605        | \$ 1,775  | 16.5x           | 12.9x | 11.2x | 37.8x               | 24.7x | 20.9x | 1.6x                        | -                                     | <div></div> | 0.8%  |
| Monro, Inc.                     | MNRO   | 53.60                       | 83.6%                   | 1,758           | 2,149     | 12.7x           | 11.6x | 10.7x | 28.4x               | 21.2x | 18.9x | 2.3x                        | (5.9%)                                | <div></div> | -     |
| Valvoline Inc.                  | VV     | \$ 22.13                    | 86.3%                   | \$ 4,427        | \$ 5,478  | 9.8x            | 11.0x | 10.6x | 14.9x               | 15.8x | 14.1x | 1.9x                        | (11.7%)                               | <div></div> | -     |
| Mean                            |        |                             |                         |                 |           | 13.0x           | 11.8x | 10.8x | 27.0x               | 20.6x | 18.0x | 1.9x                        |                                       |             |       |
| Median                          |        |                             |                         |                 |           | 12.7x           | 11.6x | 10.7x | 28.4x               | 21.2x | 18.9x | 1.9x                        |                                       |             |       |
| COLLISION                       |        |                             |                         |                 |           |                 |       |       |                     |       |       |                             |                                       |             |       |
| Boyd Group Income Fund          | BYD.UN | \$ 80.79                    | 93.0%                   | \$ 1,605        | \$ 1,775  | 16.5x           | 12.9x | 11.2x | 37.8x               | 24.7x | 20.9x | 1.6x                        | -                                     | <div></div> | 0.8%  |
| Copart, Inc.                    | CPRT   | 50.93                       | 98.4%                   | 11,815          | 12,133    | 18.5x           | 17.1x | 16.7x | 32.2x               | 26.1x | 24.0x | 0.5x                        | -                                     | <div></div> | 17.9% |
| KAR Auction Services, Inc.      | KAR    | 54.20                       | 95.5%                   | 7,285           | 11,006    | 13.3x           | 12.1x | 11.2x | 29.3x               | 18.2x | 16.3x | 4.5x                        | -                                     | <div></div> | 7.3%  |
| LKQ Corporation                 | LKQ    | \$ 37.95                    | 86.5%                   | \$ 11,750       | \$ 14,944 | 13.5x           | 11.9x | 11.1x | 23.9x               | 16.1x | 14.7x | 2.8x                        | (6.7%)                                | <div></div> | -     |
| Mean                            |        |                             |                         |                 |           | 15.4x           | 13.5x | 12.6x | 30.8x               | 21.3x | 19.0x | 2.3x                        |                                       |             |       |
| Median                          |        |                             |                         |                 |           | 15.0x           | 12.5x | 11.2x | 30.8x               | 21.5x | 18.6x | 2.2x                        |                                       |             |       |
| LIFESTYLE                       |        |                             |                         |                 |           |                 |       |       |                     |       |       |                             |                                       |             |       |
| Fox Factory Holding Corp.       | FOXF   | \$ 34.90                    | 74.6%                   | \$ 1,314        | \$ 1,390  | 17.5x           | 13.2x | 11.8x | 31.2x               | 19.7x | 17.5x | 0.8x                        | (10.2%)                               | <div></div> | -     |
| Horizon Global Corporation      | HZN    | 8.24                        | 42.8%                   | 206             | 451       | 7.2x            | 5.7x  | 5.0x  | 22.9x               | 7.8x  | 7.1x  | 3.9x                        | (41.2%)                               | <div></div> | -     |
| LKQ Corporation                 | LKQ    | 37.95                       | 86.5%                   | 11,750          | 14,944    | 13.5x           | 11.9x | 11.1x | 23.9x               | 16.1x | 14.7x | 2.8x                        | (6.7%)                                | <div></div> | -     |
| Polaris Industries Inc.         | PII    | \$ 114.52                   | 83.2%                   | \$ 7,224        | \$ 7,998  | 12.1x           | 10.5x | 9.4x  | 27.7x               | 18.7x | 16.4x | 1.3x                        | (7.6%)                                | <div></div> | -     |
| Mean                            |        |                             |                         |                 |           | 12.6x           | 10.3x | 9.3x  | 26.4x               | 15.6x | 13.9x | 2.2x                        |                                       |             |       |
| Median                          |        |                             |                         |                 |           | 12.8x           | 11.2x | 10.2x | 25.8x               | 17.4x | 15.5x | 2.0x                        |                                       |             |       |

Source: Capital IQ, Company Filings

Notes:

(1) All values converted to USD at the exchange rate of the date above

(2) Definitions: LTM = Last Twelve Months; EBITDA = Earnings Before Interest, Taxes, Depreciation, and Amortization; P/E = Stock Price / Earnings Per Share

# Financial Profiles of Select Auto Care Companies

## North American Public Aftermarket Companies – Operating Results

### PUBLIC AFTERMARKET COMPANIES – OPERATING RESULTS<sup>(1)(2)(3)(4)</sup>

As of 3/31/2018  
(\$ in millions)

| Company                                   | Ticker | LTM     | LTM      | LTM  | Net     | Margins |         |      |         | Sales Growth |        | EBITDA Growth |        | SSS<br>Latest Q |        |         |        |        |
|---|--------|---------|----------|------|---------|---------|---------|------|---------|--------------|--------|---------------|--------|-----------------|--------|---------|--------|--------|
|   |        | Revenue | EBITDA   | EBIT | Income  | Gross   | EBITDA  | EBIT | NI      | 1 Year       | 5 Year | 1 Year        | 5 Year |                 |        |         |        |        |
| SUPPLIERS                                 |        |         |          |      |         |         |         |      |         |              |        |               |        |                 |        |         |        |        |
| Affinia Group Intermediate Holdings Inc.  |        | \$      | 899.0    | \$   | 100.0   | \$      | 83.0    | \$   | (73.0)  | 23.9%        | 11.1%  | 9.2%          | (8.1%) | (7.3%)          | (7.9%) | (21.3%) | (9.1%) |        |
| Avalta Coating Systems Ltd.               | AXTA   |         | 4,535.3  |      | 861.9   |         | 510.9   |      | 42.5    | 35.7%        | 19.0%  | 11.3%         | 0.9%   | 9.5%            | NA     | (1.1%)  | NA     |        |
| Cooper Tire & Rubber Company              | CTB    |         | 2,813.1  |      | 401.1   |         | 259.2   |      | 73.1    | 17.8%        | 14.3%  | 9.2%          | 2.6%   | (3.6%)          | (7.2%) | (27.5%) | (7.0%) |        |
| Dorman Products, Inc.                     | DORM   |         | 908.9    |      | 195.6   |         | 172.8   |      | 108.1   | 39.5%        | 21.5%  | 19.0%         | 11.9%  | 4.1%            | 9.0%   | 1.2%    | 10.6%  |        |
| The Goodyear Tire & Rubber Company        | GT     |         | 15,508.0 |      | 2,051.0 |         | 1,289.0 |      | 255.0   | 23.3%        | 13.2%  | 8.3%          | 1.6%   | 2.3%            | (5.3%) | (18.1%) | 2.3%   |        |
| Horizon Global Corporation                | HZN    |         | 893.0    |      | 62.9    |         | 37.6    |      | (3.6)   | 23.3%        | 7.1%   | 4.2%          | (0.4%) | 37.6%           | NA     | 24.9%   | NA     |        |
| Motorcar Parts of America, Inc.           | MPAA   |         | 421.4    |      | 59.8    |         | 55.5    |      | 16.9    | 26.4%        | 14.2%  | 13.2%         | 4.0%   | 4.2%            | 10.4%  | (11.1%) | 12.0%  |        |
| PPG Industries, Inc.                      | PPG    |         | 15,050.0 |      | 2,509.0 |         | 2,048.0 |      | 1,610.0 | 43.6%        | 16.7%  | 13.6%         | 10.7%  | 1.5%            | 2.5%   | (1.9%)  | 5.8%   |        |
| Snap-on Incorporated                      | SNA    |         | 4,054.9  |      | 1,018.9 |         | 939.5   |      | 579.1   | 51.1%        | 25.1%  | 23.2%         | 14.3%  | 7.4%            | 5.4%   | 7.4%    | 10.8%  |        |
| Standard Motor Products, Inc.             | SMP    |         | 1,116.1  |      | 149.3   |         | 125.9   |      | 38.0    | 29.3%        | 13.4%  | 11.3%         | 3.4%   | 5.5%            | 3.3%   | 6.6%    | 7.9%   |        |
| Valvoline Inc.                            | VV     | \$      | 2,140.0  | \$   | 560.0   | \$      | 516.0   | \$   | 222.0   | 36.8%        | 26.2%  | 24.1%         | 10.4%  | 9.1%            | NA     | 13.8%   | NA     |        |
| Mean                                      |        | \$      | 4,394.5  | \$   | 724.5   | \$      | 548.9   | \$   | 260.7   | 31.9%        | 16.5%  | 13.3%         | 4.7%   | 6.4%            | 1.3%   | (2.5%)  | 4.2%   | NA     |
| Median                                    |        | \$      | 2,140.0  | \$   | 401.1   | \$      | 259.2   | \$   | 73.1    | 29.3%        | 14.3%  | 11.3%         | 3.4%   | 4.2%            | 2.9%   | (1.1%)  | 6.9%   | NA     |
| PARTS RETAILERS & DISTRIBUTORS            |        |         |          |      |         |         |         |      |         |              |        |               |        |                 |        |         |        |        |
| Advance Auto Parts, Inc.                  | AAP    | \$      | 9,373.8  | \$   | 909.4   | \$      | 660.1   | \$   | 475.5   | 43.6%        | 9.7%   | 7.0%          | 5.1%   | (2.0%)          | 8.6%   | (18.9%) | 1.4%   | (2.6%) |
| American Tire Distributors Holdings, Inc. |        |         | 5,030.7  |      | 241.7   |         | 89.1    |      | (94.6)  | 17.7%        | 4.8%   | 1.8%          | (1.9%) | 31.1%           | 18.3%  | 29.4%   | 19.4%  |        |
| AutoZone, Inc.                            | AZO    |         | 11,133.8 |      | 2,391.7 |         | 2,056.0 |      | 1,336.1 | 52.3%        | 21.5%  | 18.5%         | 12.0%  | 3.6%            | 5.0%   | 0.1%    | 4.9%   | 2.2%   |
| Genuine Parts Company                     | GPC    |         | 16,989.5 |      | 1,273.5 |         | 1,085.6 |      | 633.2   | 30.6%        | 7.5%   | 6.4%          | 3.7%   | 9.4%            | 5.5%   | 5.6%    | 2.7%   | 1.0%   |
| LKQ Corporation                           | LKQ    |         | 10,114.8 |      | 1,103.2 |         | 862.6   |      | 550.4   | 38.8%        | 10.9%  | 8.5%          | 5.4%   | 12.3%           | 18.7%  | 4.2%    | 16.5%  | 5.8%   |
| O'Reilly Automotive, Inc.                 | ORLY   |         | 9,104.2  |      | 1,991.9 |         | 1,745.1 |      | 1,173.8 | 52.6%        | 21.9%  | 19.2%         | 12.9%  | 5.2%            | 7.9%   | 4.4%    | 11.5%  | 1.3%   |
| Snap-on Incorporated                      | SNA    |         | 4,054.9  |      | 1,018.9 |         | 939.5   |      | 579.1   | 51.1%        | 25.1%  | 23.2%         | 14.3%  | 7.4%            | 5.4%   | 7.4%    | 10.8%  |        |
| U.S. Auto Parts Network, Inc.             | PRTS   |         | 303.4    |      | 11.4    |         | 4.6     |      | 24.0    | 29.6%        | 3.7%   | 1.5%          | 7.9%   | 0.0%            | (0.0%) | (7.4%)  | 8.0%   |        |
| Uni-Select Inc.                           | UNS    | \$      | 1,448.3  | \$   | 114.2   | \$      | 88.4    | \$   | 44.6    | 32.1%        | 7.9%   | 6.1%          | 3.1%   | 21.0%           | (4.2%) | 9.7%    | 7.7%   | (0.8%) |
| Mean                                      |        | \$      | 7,505.9  | \$   | 1,006.2 | \$      | 836.8   | \$   | 524.7   | 38.7%        | 12.6%  | 10.2%         | 6.9%   | 9.8%            | 7.2%   | 3.8%    | 9.2%   | 1.2%   |
| Median                                    |        | \$      | 9,104.2  | \$   | 1,018.9 | \$      | 862.6   | \$   | 550.4   | 38.8%        | 9.7%   | 7.0%          | 5.4%   | 7.4%            | 5.5%   | 4.4%    | 8.0%   | 1.2%   |
| RETAIL SERVICE PROVIDERS                  |        |         |          |      |         |         |         |      |         |              |        |               |        |                 |        |         |        |        |
| Boyd Group Income Fund                    | BYD.UN | \$      | 1,569.5  | \$   | 135.1   | \$      | 94.2    | \$   | 58.4    | 45.8%        | 8.6%   | 6.0%          | 3.7%   | 13.1%           | 29.3%  | 18.2%   | 37.5%  | 1.0%   |
| Monro, Inc.                               | MNRO   |         | 1,094.3  |      | 169.9   |         | 122.1   |      | 56.1    | 38.5%        | 15.5%  | 11.2%         | 5.1%   | 9.6%            | 9.1%   | 1.7%    | 10.5%  | (3.1%) |
| Valvoline Inc.                            | VV     | \$      | 2,140.0  | \$   | 560.0   | \$      | 516.0   | \$   | 222.0   | 36.8%        | 26.2%  | 24.1%         | 10.4%  | 9.1%            | NA     | 13.8%   | NA     |        |
| Mean                                      |        | \$      | 1,601.2  | \$   | 288.3   | \$      | 244.1   | \$   | 112.2   | 40.4%        | 16.8%  | 13.8%         | 6.4%   | 10.6%           | 19.2%  | 11.2%   | 24.0%  | (1.1%) |
| Median                                    |        | \$      | 1,569.5  | \$   | 169.9   | \$      | 122.1   | \$   | 58.4    | 38.5%        | 15.5%  | 11.2%         | 5.1%   | 9.6%            | 19.2%  | 13.8%   | 24.0%  | (1.1%) |
| COLLISION                                 |        |         |          |      |         |         |         |      |         |              |        |               |        |                 |        |         |        |        |
| Boyd Group Income Fund                    | BYD.UN | \$      | 1,569.5  | \$   | 135.1   | \$      | 94.2    | \$   | 58.4    | 45.8%        | 8.6%   | 6.0%          | 3.7%   | 13.1%           | 29.3%  | 18.2%   | 37.5%  | 1.0%   |
| Copart, Inc.                              | CPRT   |         | 1,630.7  |      | 656.4   |         | 606.2   |      | 341.7   | 48.3%        | 40.3%  | 37.2%         | 21.0%  | 18.6%           | 10.8%  | 34.3%   | 14.1%  |        |
| KAR Auction Services, Inc.                | KAR    |         | 3,458.0  |      | 830.6   |         | 566.0   |      | 362.0   | 42.5%        | 24.0%  | 16.4%         | 10.5%  | 9.8%            | 12.0%  | 12.3%   | 12.0%  |        |
| LKQ Corporation                           | LKQ    | \$      | 10,114.8 | \$   | 1,103.2 | \$      | 862.6   | \$   | 550.4   | 38.8%        | 10.9%  | 8.5%          | 5.4%   | 12.3%           | 18.7%  | 4.2%    | 16.5%  | 5.8%   |
| Mean                                      |        | \$      | 4,193.3  | \$   | 681.3   | \$      | 532.2   | \$   | 328.1   | 43.8%        | 20.9%  | 17.0%         | 10.1%  | 13.4%           | 17.7%  | 17.3%   | 20.0%  | 3.4%   |
| Median                                    |        | \$      | 2,544.4  | \$   | 743.5   | \$      | 586.1   | \$   | 351.8   | 44.2%        | 17.5%  | 12.5%         | 8.0%   | 12.7%           | 15.4%  | 15.3%   | 15.3%  | 3.4%   |
| LIFESTYLE                                 |        |         |          |      |         |         |         |      |         |              |        |               |        |                 |        |         |        |        |
| Fox Factory Holding Corp.                 | FOXF   | \$      | 475.6    | \$   | 79.4    | \$      | 69.6    | \$   | 43.1    | 32.5%        | 16.7%  | 14.6%         | 9.1%   | 18.0%           | 15.1%  | 31.3%   | 18.9%  |        |
| Horizon Global Corporation                | HZN    |         | 893.0    |      | 62.9    |         | 37.6    |      | (3.6)   | 23.3%        | 7.1%   | 4.2%          | (0.4%) | 37.6%           | NA     | 24.9%   | NA     |        |
| LKQ Corporation                           | LKQ    |         | 10,114.8 |      | 1,103.2 |         | 862.6   |      | 550.4   | 38.8%        | 10.9%  | 8.5%          | 5.4%   | 12.3%           | 18.7%  | 4.2%    | 16.5%  | 5.8%   |
| Polaris Industries Inc.                   | PII    | \$      | 5,649.5  | \$   | 659.2   | \$      | 459.9   | \$   | 231.1   | 26.9%        | 11.7%  | 8.1%          | 4.1%   | 18.5%           | 11.2%  | 24.7%   | 3.2%   |        |
| Mean                                      |        | \$      | 4,283.2  | \$   | 476.2   | \$      | 357.4   | \$   | 205.3   | 30.4%        | 11.6%  | 8.9%          | 4.6%   | 21.6%           | 15.0%  | 21.3%   | 12.9%  | NA     |
| Median                                    |        | \$      | 3,271.2  | \$   | 369.3   | \$      | 264.8   | \$   | 137.1   | 29.7%        | 11.3%  | 8.3%          | 4.8%   | 18.3%           | 15.1%  | 24.8%   | 16.5%  | NA     |

Source: Capital IQ, Jefferies LLC

Notes:

(1) All values converted to USD at the exchange rate of the date above

(2) Affinia Group and American Tire Distributors have publicly traded debt only and thus are included in operating and performance metrics, but not valuation metrics

(3) Same store sales figures are reflective only of portions applicable to the automotive aftermarket

(4) Definitions: LTM = Last Twelve Months; EBITDA = Earnings Before Interest, Taxes, Depreciation, and Amortization; EBIT = Earnings Before Interest, Taxes; NI = Net Income; SSS = Same Store Sales

Automotive Aftermarket | March 31, 2018

Jefferies.com

# Financial Profiles of Select Auto Care Companies

## North American Public Aftermarket Companies – Balance Sheet Metrics

### PUBLIC AFTERMARKET COMPANIES – BALANCE SHEET METRICS<sup>(1)(2)(3)</sup>

As of 3/31/2018

(\$ in millions)

| Company                                   | Ticker | Days Outstanding |           |       | Cash Conversion | Total Debt | Debt / Capital | Debt / EBITDA | Interest Coverage | Current Ratio | Quick Ratio | S&P Debt |          |
|---|--------|------------------|-----------|-------|-----------------|------------|----------------|---------------|-------------------|---------------|-------------|----------|----------|
|   |        | A / R            | Inventory | A / P |                 |            |                |               |                   |               |             | Rating   | Outlook  |
| SUPPLIERS                                 |        |                  |           |       |                 |            |                |               |                   |               |             |          |          |
| Affinia Group Intermediate Holdings Inc.  |        | 34.3             | 82.5      | 47.8  | 69.0            | \$ 740.0   | 171.3%         | 7.4x          | 1.3x              | 0.9x          | 0.3x        | NR       | NR       |
| Avialta Coating Systems Ltd.              | AXTA   | 63.1             | 75.2      | 62.5  | 75.8            | 3,961.3    | 72.2%          | 4.6x          | 4.9x              | 2.3x          | 1.4x        | NA       | NA       |
| Cooper Tire & Rubber Company              | CTB    | 60.2             | 92.9      | 41.9  | 111.2           | 337.7      | 21.9%          | 0.8x          | 5.9x              | 2.6x          | 1.3x        | BB       | Stable   |
| Dorman Products, Inc.                     | DORM   | 96.8             | 125.0     | 42.0  | 179.9           | 0.0        | NA             | NM            | NM                | 5.6x          | 3.4x        | NA       | NA       |
| The Goodyear Tire & Rubber Company        | GT     | 55.6             | 88.0      | 83.7  | 59.9            | 6,259.0    | 55.8%          | 3.1x          | 3.7x              | 1.3x          | 0.7x        | BB       | Stable   |
| Horizon Global Corporation                | HZN    | 34.6             | 84.6      | 64.3  | 54.9            | 275.6      | 66.3%          | 4.4x          | 1.6x              | 1.5x          | 0.6x        | B        | Negative |
| Motorcar Parts of America, Inc.           | MPAA   | 11.3             | 96.9      | 83.4  | 24.8            | 53.7       | 16.7%          | 0.9x          | 3.7x              | 0.7x          | 0.1x        | NA       | NA       |
| PPG Industries, Inc.                      | PPG    | NA               | NA        | NA    | NA              | 4,146.0    | 42.2%          | 1.7x          | 23.7x             |               |             | A-       | Stable   |
| Snap-on Incorporated                      | SNA    | 63.4             | 119.2     | 34.1  | 148.5           | 1,091.5    | 26.0%          | 1.1x          | 17.7x             | 2.3x          | 1.5x        | A-       | Stable   |
| Standard Motor Products, Inc.             | SMP    | 44.9             | 147.7     | 36.8  | 155.8           | 61.8       | 12.0%          | 0.4x          | 53.6x             | 1.7x          | 0.6x        | NR       | NR       |
| Valvoline Inc.                            | VVV    | 65.8             | 42.0      | 37.9  | 69.8            | \$ 1,166.0 | 120.0%         | 2.1x          | 10.6x             | 2.0x          | 1.5x        | BB+      | Stable   |
| Mean                                      |        | 53.0             | 95.4      | 53.4  | 95.0            | \$ 1,644.8 | 60.4%          | 2.6x          | 12.7x             | 2.1x          | 1.1x        |          |          |
| Median                                    |        | 57.9             | 90.5      | 44.9  | 72.8            | \$ 740.0   | 49.0%          | 1.9x          | 5.4x              | 1.9x          | 1.0x        |          |          |
| PARTS RETAILERS & DISTRIBUTORS            |        |                  |           |       |                 |            |                |               |                   |               |             |          |          |
| Advance Auto Parts, Inc.                  | AAP    | 14.6             | 292.3     | 212.1 | 94.8            | \$ 1,044.7 | 23.4%          | 1.2x          | 12.2x             | 1.6x          | 0.3x        | BBB-     | Stable   |
| American Tire Distributors Holdings, Inc. |        | 25.0             | 82.7      | 54.9  | 52.9            | 1,824.0    | 74.5%          | 7.6x          | 1.3x              | 1.8x          | 0.5x        | NR       | NR       |
| AutoZone, Inc.                            | AZO    | 8.7              | 274.0     | 281.1 | 1.5             | 5,043.5    | 135.8%         | 2.1x          | 10.9x             | 1.0x          | 0.1x        | BBB      | Stable   |
| Genuine Parts Company                     | GPC    | 50.8             | 109.3     | 104.1 | 55.9            | 3,315.7    | 48.2%          | 2.6x          | 18.9x             | 1.3x          | 0.5x        | NA       | NA       |
| LKQ Corporation                           | LKQ    | 39.4             | 129.2     | 40.4  | 128.2           | 3,313.1    | 42.9%          | 3.0x          | 8.5x              | 2.7x          | 1.0x        | BB       | Stable   |
| O'Reilly Automotive, Inc.                 | ORLY   | 8.4              | 250.7     | 252.3 | 6.9             | 3,193.1    | 88.3%          | 1.6x          | 15.2x             | 0.9x          | 0.1x        | BBB+     | Stable   |
| Snap-on Incorporated                      | SNA    | 63.4             | 119.2     | 34.1  | 148.5           | 1,091.5    | 26.0%          | 1.1x          | 17.7x             | 2.3x          | 1.5x        | A-       | Stable   |
| U.S. Auto Parts Network, Inc.             | PRTS   | 3.4              | 89.5      | 58.5  | 34.5            | 9.8        | 19.5%          | 0.9x          | 3.9x              | 1.3x          | 0.1x        | NA       | NA       |
| Uni-Select Inc.                           | UNS    | 43.2             | 146.5     | 130.1 | 59.5            | \$ 448.5   | 46.4%          | 3.9x          | 8.5x              | 1.5x          | 0.6x        | NA       | NA       |
| Mean                                      |        | 28.5             | 165.9     | 129.7 | 64.7            | \$ 2,142.6 | 56.1%          | 2.7x          | 10.8x             | 1.6x          | 0.5x        |          |          |
| Median                                    |        | 25.0             | 129.2     | 104.1 | 55.9            | \$ 1,824.0 | 46.4%          | 2.1x          | 10.9x             | 1.5x          | 0.5x        |          |          |
| RETAIL SERVICE PROVIDERS                  |        |                  |           |       |                 |            |                |               |                   |               |             |          |          |
| Boyd Group Income Fund                    | BYD.UN | 22.4             | 10.8      | 75.7  | (42.5)          | \$ 266.9   | 37.8%          | 2.0x          | 6.8x              | NA            | NA          | NA       | NA       |
| Monro, Inc.                               | MNRO   | 4.1              | 75.6      | 44.9  | 34.8            | 399.3      | 39.4%          | 2.4x          | 5.7x              | 1.1x          | 0.1x        | NA       | NA       |
| Valvoline Inc.                            | VVV    | 65.8             | 42.0      | 37.9  | 69.8            | \$ 1,166.0 | 120.0%         | 2.1x          | 10.6x             | 2.0x          | 1.5x        | BB+      | Stable   |
| Mean                                      |        | 30.7             | 42.8      | 52.9  | 20.7            | \$ 610.7   | 65.7%          | 2.1x          | 7.7x              | 1.5x          | 0.8x        |          |          |
| Median                                    |        | 22.4             | 42.0      | 44.9  | 34.8            | \$ 399.3   | 39.4%          | 2.1x          | 6.8x              | 1.5x          | 0.8x        |          |          |
| COLLISION                                 |        |                  |           |       |                 |            |                |               |                   |               |             |          |          |
| Boyd Group Income Fund                    | BYD.UN | 22.4             | 10.8      | 75.7  | (42.5)          | \$ 266.9   | 37.8%          | 2.0x          | 6.8x              | NA            | NA          | NA       | NA       |
| Copart, Inc.                              | CPRT   | 82.8             | 4.8       | 92.1  | (4.5)           | 512.5      | 27.8%          | 0.8x          | 20.2x             | 1.8x          | 1.6x        | NA       | NA       |
| KAR Auction Services, Inc.                | KAR    | 268.5            | NA        | 122.3 | NA              | 4,038.2    | 73.1%          | 4.9x          | 4.1x              | 1.3x          | 1.2x        | BB-      | Stable   |
| LKQ Corporation                           | LKQ    | 39.4             | 129.2     | 40.4  | 128.2           | \$ 3,313.1 | 42.9%          | 3.0x          | 8.5x              | 2.7x          | 1.0x        | BB       | Stable   |
| Mean                                      |        | 103.3            | 48.3      | 82.6  | 27.1            | \$ 2,032.7 | 45.4%          | 2.7x          | 9.9x              | 1.9x          | 1.3x        |          |          |
| Median                                    |        | 61.1             | 10.8      | 83.9  | (4.5)           | \$ 1,912.8 | 40.3%          | 2.5x          | 7.7x              | 1.8x          | 1.2x        |          |          |
| LIFESTYLE                                 |        |                  |           |       |                 |            |                |               |                   |               |             |          |          |
| Fox Factory Holding Corp.                 | FOXF   | 46.9             | 88.5      | 41.9  | 93.5            | \$ 98.6    | 28.5%          | 1.2x          | 26.1x             | NA            | NA          | NA       | NA       |
| Horizon Global Corporation                | HZN    | 34.6             | 84.6      | 64.3  | 54.9            | 275.6      | 66.3%          | 4.4x          | 1.6x              | 1.5x          | 0.6x        | B        | Negative |
| LKQ Corporation                           | LKQ    | 39.4             | 129.2     | 40.4  | 128.2           | 3,313.1    | 42.9%          | 3.0x          | 8.5x              | 2.7x          | 1.0x        | BB       | Stable   |
| Polaris Industries Inc.                   | PII    | 11.9             | 76.2      | 30.7  | 57.4            | \$ 1,029.5 | 51.4%          | 1.6x          | 14.2x             | 1.2x          | 0.3x        | NA       | NA       |
| Mean                                      |        | 33.2             | 94.6      | 44.3  | 83.5            | \$ 1,179.2 | 47.2%          | 2.5x          | 12.6x             | 1.8x          | 0.6x        |          |          |
| Median                                    |        | 37.0             | 86.6      | 41.2  | 75.5            | \$ 652.5   | 47.1%          | 2.3x          | 11.4x             | 1.5x          | 0.6x        |          |          |

Source: Capital IQ, Jefferies LLC

Notes:

(1) All values converted to USD at the exchange rate of the date above

(2) Affinia Group and American Tire Distributors have publicly traded debt only and thus are included in operating and performance metrics, but not valuation metrics

(3) Definitions: A/R = Account Receivable; A/P = Account Payable; EBITDA = Earnings Before Interest, Taxes, Depreciation, Amortization

# Financial Profiles of Select Auto Care Companies

## European Public Aftermarket Companies – Valuation Metrics

### EUROPEAN PUBLIC AFTERMARKET COMPANIES – VALUATION METRICS<sup>(1)(2)</sup>

As of 3/31/2018

(\$ in millions, except per share)

|  |             |                       |                   |              |           | TEV / EBITDA |       |       | Price / Earnings |       |       | Net Debt / LTM EBITDA | Q1-2018 Stock Price Performance |             |       |
|--|-------------|-----------------------|-------------------|--------------|-----------|--------------|-------|-------|------------------|-------|-------|-----------------------|---------------------------------|-------------|-------|
| Company                                      | Ticker      | Price as of 3/31/2018 | % of 52-Week High | Equity Value | TEV       | LTM          | 2018E | 2019E | LTM              | 2018E | 2019E |                       |                                 |             |       |
| RETAILERS, DISTRIBUTORS, & SERVICE PROVIDERS |             |                       |                   |              |           |              |       |       |                  |       |       |                       |                                 |             |       |
| AA plc                                       | LSE:AA      | \$ 1.13               | 29.4%             | \$ 690       | \$ 4,420  | 9.3x         | 9.1x  | 8.7x  | 5.1x             | 5.1x  | 4.7x  | 7.9x                  | (50.7%)                         | <div></div> | -     |
| Auto Partner SA                              | WSE:APR     | 1.24                  | 72.5%             | 161          | 203       | 11.7x        | 8.1x  | 7.2x  | 20.7x            | NM    | NM    | 2.7x                  | (8.1%)                          | <div></div> | -     |
| BCA Marketplace plc                          | LSE:BCA     | 2.27                  | 70.3%             | 1,808        | 2,317     | 13.0x        | 10.3x | 9.4x  | 32.4x            | 14.2x | 12.6x | 2.7x                  | (17.8%)                         | <div></div> | -     |
| Delticom AG                                  | XTRA:DEX    | 11.65                 | 52.0%             | 145          | 160       | 17.2x        | 8.4x  | 7.2x  | NM               | 22.8x | 16.2x | 1.5x                  | (15.6%)                         | <div></div> | -     |
| D'leteren SA                                 | ENXTBR:DIE  | 40.53                 | 70.7%             | 2,197        | 1,897     | 13.3x        | 3.2x  | 3.0x  | 31.4x            | 7.7x  | 7.5x  | NM                    | (10.0%)                         | <div></div> | -     |
| Halfords Group plc                           | LSE:HFD     | 4.58                  | 85.8%             | 897          | 1,016     | 7.7x         | 6.5x  | 6.1x  | 15.3x            | 10.9x | 10.0x | 0.9x                  | (3.0%)                          | <div></div> | -     |
| Inter Cars S.A.                              | WSE:CAR     | 76.63                 | 76.0%             | 1,086        | 1,426     | 13.9x        | 10.6x | 9.7x  | 22.9x            | 12.2x | 10.8x | 3.0x                  | (13.9%)                         | <div></div> | -     |
| Kamux Oyj                                    | HLSE: KAMUX | 8.38                  | 75.6%             | 335          | 344       | 16.5x        | 12.1x | 9.4x  | 27.9x            | NA    | NA    | 0.5x                  | (0.9%)                          | <div></div> | -     |
| Mekonomen AB (publ)                          | OM:MEKO     | 17.09                 | 76.5%             | 614          | 790       | 9.5x         | 8.8x  | 8.3x  | 16.9x            | 11.3x | 10.6x | 2.1x                  | (6.1%)                          | <div></div> | -     |
| Opono.pl S.A.                                | WSE:OPN     | 11.99                 | 78.8%             | 167          | 145       | NM           | NM    | NM    | 50.0x            | NA    | NA    | NM                    | -                               | <div></div> | 3.1%  |
| Opus Group AB                                | OM: OPUS    | \$ 0.74               | 77.1%             | \$ 214       | \$ 331    | 8.7x         | 6.4x  | 5.6x  | NM               | 24.7x | 14.8x | 3.1x                  | (6.3%)                          | <div></div> | -     |
| Mean   |             |                       |                   |              |           | 12.1x        | 8.3x  | 7.5x  | 24.7x            | 13.6x | 10.9x | 2.7x                  |                                 |             |       |
| Median                                       |             |                       |                   |              |           | 12.3x        | 8.6x  | 7.7x  | 22.9x            | 11.7x | 10.7x | 2.7x                  |                                 |             |       |
| SUBSTANTIALLY AFTERMARKET SUPPLIERS          |             |                       |                   |              |           |              |       |       |                  |       |       |                       |                                 |             |       |
| Firma Oponiarska                             | WSE: DBC    | \$ 36.27              | 97.6%             | \$ 501       | \$ 407    | 6.4x         | NM    | NM    | NM               | NM    | NM    | NM                    | -                               | <div></div> | 20.3% |
| MAM Software Group, Inc.                     | NASDAQ:MAMS | 7.83                  | 83.1%             | 99           | 103       | 19.4x        | 16.6x | NM    | 34.0x            | 27.0x | NM    | 0.9x                  | -                               | <div></div> | 4.3%  |
| Michelin SCA                                 | ENXTPA:ML   | 147.71                | 91.6%             | 26,519       | 27,679    | 5.8x         | 5.2x  | 4.9x  | 14.2x            | 11.4x | 10.5x | 0.2x                  | -                               | <div></div> | 2.9%  |
| Pankl Racing Systems AG                      | WBAG:PARS   | 50.76                 | 91.5%             | 160          | 270       | 8.6x         | NM    | NM    | NM               | NM    | NM    | 3.4x                  | -                               | <div></div> | 3.1%  |
| Washtec AG                                   | DB:WSU      | 95.97                 | 93.1%             | 1,284        | 1,293     | 17.2x        | 15.6x | 14.4x | 33.2x            | 26.0x | 23.8x | 0.1x                  | -                               | <div></div> | 1.2%  |
| Wielton S.A.                                 | WSE:WLT     | \$ 3.84               | 69.4%             | \$ 232       | \$ 280    | 9.4x         | 7.7x  | 6.8x  | 19.2x            | NA    | NA    | 1.6x                  | -                               | <div></div> | 3.8%  |
| Mean   |             |                       |                   |              |           | 11.1x        | 11.3x | 8.7x  | 25.2x            | 21.5x | 17.1x | 1.2x                  |                                 |             |       |
| Median                                       |             |                       |                   |              |           | 9.0x         | 11.6x | 6.8x  | 26.2x            | 26.0x | 17.1x | 0.9x                  |                                 |             |       |
| COMBINATION OE AND AFTERMARKET SUPPLIERS     |             |                       |                   |              |           |              |       |       |                  |       |       |                       |                                 |             |       |
| Brembo S.p.A.                                | BIT:BRE     | \$ 15.45              | 82.1%             | \$ 5,024     | \$ 5,328  | 9.8x         | 8.4x  | 8.0x  | 20.3x            | 14.7x | 13.8x | 0.5x                  | -                               | <div></div> | 1.6%  |
| Continental Aktiengesellschaft               | DB: CON     | 274.73                | 86.9%             | 54,948       | 58,238    | 8.0x         | 6.5x  | 6.0x  | 16.9x            | 13.0x | 11.7x | 0.4x                  | -                               | <div></div> | 1.5%  |
| HELLA GmbH & Co. KGaA                        | DB:HLE      | 63.69                 | 87.0%             | 7,077        | 7,391     | 6.6x         | 5.7x  | 5.2x  | 17.3x            | 13.8x | 12.5x | 0.3x                  | -                               | <div></div> | 2.8%  |
| Kongsberg Automotive ASA                     | OB:KOA      | 1.13                  | 74.3%             | 460          | 738       | 8.9x         | 4.7x  | 3.9x  | NM               | 8.7x  | 5.4x  | 3.2x                  | (21.0%)                         | <div></div> | -     |
| MGI Coutier SA                               | ENXTPA:MGIC | 37.70                 | 77.7%             | 1,008        | 1,018     | 5.9x         | 5.1x  | 4.9x  | NM               | 9.1x  | 8.9x  | NM                    | (6.8%)                          | <div></div> | -     |
| SAF-Holland S.A.                             | DB:SFQ      | 20.35                 | 82.4%             | 924          | 1,056     | 8.3x         | 7.2x  | 6.5x  | 17.1x            | 13.2x | 11.2x | 1.0x                  | (5.8%)                          | <div></div> | -     |
| Sanok Rubber Company Spółka Akcyj            | WSE: SNK    | 10.70                 | 52.3%             | 288          | 302       | 7.0x         | 6.4x  | 5.9x  | 14.1x            | 10.6x | 9.6x  | 0.3x                  | (18.5%)                         | <div></div> | -     |
| Schaeffler AG                                | DB:SHA      | 15.42                 | 74.8%             | 10,269       | 13,275    | 4.8x         | 4.4x  | 4.1x  | 9.9x             | 8.1x  | 7.4x  | 1.0x                  | (12.4%)                         | <div></div> | -     |
| Valeo SA                                     | ENXTPA:FR   | \$ 66.08              | 79.1%             | \$ 15,723    | \$ 18,900 | 7.6x         | 5.9x  | 5.3x  | 16.9x            | 12.7x | 10.9x | 0.9x                  | (11.6%)                         | <div></div> | -     |
| Mean   |             |                       |                   |              |           | 7.4x         | 6.0x  | 5.5x  | 16.1x            | 11.5x | 10.1x | 0.9x                  |                                 |             |       |
| Median                                       |             |                       |                   |              |           | 7.6x         | 5.9x  | 5.3x  | 16.9x            | 12.7x | 10.9x | 0.7x                  |                                 |             |       |
| DEALERS                                      |             |                       |                   |              |           |              |       |       |                  |       |       |                       |                                 |             |       |
| Auto Trader Group plc                        | LSE: AUTO   | \$ 4.92               | 78.7%             | \$ 4,660     | \$ 5,142  | 17.8x        | 15.1x | 14.0x | 28.9x            | 18.2x | 17.6x | 1.6x                  | -                               | <div></div> | 3.4%  |
| Biila AB                                     | OM:BILI A   | 8.87                  | 77.1%             | 895          | 1,430     | 7.7x         | 7.4x  | 7.4x  | 13.6x            | 10.2x | 10.0x | 1.3x                  | (9.1%)                          | <div></div> | -     |
| Cambria Automobiles plc                      | AIM:CAMB    | 0.88                  | 79.3%             | 88           | 116       | 6.6x         | 6.6x  | 6.2x  | 9.8x             | 8.0x  | 8.0x  | 1.4x                  | -                               | <div></div> | 7.3%  |
| Inchcape plc                                 | LSE:INCH    | 9.70                  | 78.1%             | 4,020        | 4,532     | 7.4x         | 6.9x  | 6.8x  | 12.9x            | 10.8x | 10.2x | 0.8x                  | (8.1%)                          | <div></div> | -     |
| Lookers plc                                  | LSE:LOOK    | 1.22                  | 63.5%             | 486          | 675       | 5.2x         | 4.5x  | 4.3x  | 9.4x             | 6.4x  | 5.8x  | 5.2x                  | (12.2%)                         | <div></div> | -     |
| British Automotive Holding S.A.              | WSE:BAH     | 2.43                  | 48.3%             | 101          | 114       | 6.7x         | 6.2x  | 5.7x  | 10.6x            | 7.1x  | 6.6x  | 0.7x                  | (16.2%)                         | <div></div> | -     |
| Pendragon PLC                                | LSE:PDG     | 0.33                  | 60.0%             | 460          | 634       | 3.1x         | 3.5x  | 3.2x  | 8.3x             | 6.6x  | 6.6x  | 0.8x                  | (13.2%)                         | <div></div> | -     |
| Stern Groep N.V.                             | ENXTAM:STRN | 19.71                 | 62.6%             | 112          | 651       | 8.8x         | 13.5x | 13.3x | NM               | 4.8x  | 4.7x  | 7.1x                  | (17.9%)                         | <div></div> | -     |
| Vertu Motors plc                             | AIM:VTU     | \$ 0.61               | 83.6%             | \$ 232       | \$ 203    | 3.8x         | 3.7x  | 3.5x  | 10.2x            | 7.6x  | 7.6x  | NM                    | (10.3%)                         | <div></div> | -     |
| Mean   |             |                       |                   |              |           | 7.4x         | 7.5x  | 7.2x  | 13.0x            | 8.9x  | 8.6x  | 2.4x                  |                                 |             |       |
| Median                                       |             |                       |                   |              |           | 6.7x         | 6.6x  | 6.2x  | 10.4x            | 7.6x  | 7.6x  | 1.4x                  |                                 |             |       |
| LIFESTYLE                                    |             |                       |                   |              |           |              |       |       |                  |       |       |                       |                                 |             |       |
| Dometic Group AB                             | OM:DOM      | \$ 9.14               | 83.5%             | \$ 2,704     | \$ 3,829  | 12.9x        | 10.6x | 9.9x  | 20.3x            | 12.5x | 11.4x | 4.1x                  | (10.3%)                         | <div></div> | -     |
| Thule Group AB                               | OM:THULE    | \$ 21.65              | 93.5%             | \$ 2,234     | \$ 2,442  | 17.4x        | 16.7x | 15.1x | 28.1x            | 22.1x | 19.7x | 1.7x                  | (4.0%)                          | <div></div> | -     |
| Mean   |             |                       |                   |              |           | 15.2x        | 13.7x | 12.5x | 24.2x            | 17.3x | 15.6x | 2.9x                  |                                 |             |       |
| Median                                       |             |                       |                   |              |           | 15.2x        | 13.7x | 12.5x | 24.2x            | 17.3x | 15.6x | 2.9x                  |                                 |             |       |

Source: Capital IQ, Company Filings

Notes:

(1) All values converted to USD at the exchange rate of the date above

(2) Definitions: LTM = Last Twelve Months; EBITDA = Earnings Before Interest, Taxes, Depreciation, and Amortization; P/E = Stock Price / Earnings Per Share

# Select Auto Care Transactions

## OEM and Dealer – Valuation Metrics

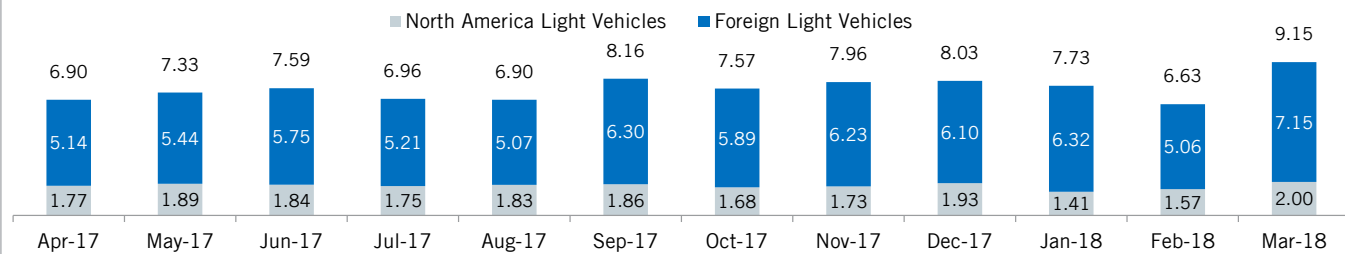
### OEM and Dealer – VALUATION METRICS<sup>(1)(2)</sup>

As of 3/31/2018  
(\$ in millions, except per share)

| Company                            | Ticker          | Price<br>as of<br>3/31/2018 | % of<br>52-Week<br>High | Equity<br>Value | TEV        | TEV /<br>EBITDA |       |       | Price /<br>Earnings |       |       | Net Debt<br>/ LTM<br>EBITDA | Q1-2018<br>Stock Price<br>Performance |             |       |
|------------------------------------|-----------------|-----------------------------|-------------------------|-----------------|------------|-----------------|-------|-------|---------------------|-------|-------|-----------------------------|---------------------------------------|-------------|-------|
|                                    |                 |                             |                         |                 |            | LTM             | 2018E | 2019E | LTM                 | 2018E | 2019E |                             |                                       |             |       |
| OEMS                               |                 |                             |                         |                 |            |                 |       |       |                     |       |       |                             |                                       |             |       |
| B. M. W.                           | DB: BMW         | \$ 108.41                   | 90.7%                   | \$ 70,482       | \$ 167,618 | 10.5x           | 9.3x  | 8.9x  | 9.1x                | 7.7x  | 7.6x  | 5.9x                        | -                                     | <div></div> | 3.8%  |
| Daimler AG                         | XTRA: DAI       | 84.97                       | 90.2%                   | 90,904          | 226,431    | 10.9x           | 9.1x  | 8.8x  | 8.9x                | 7.4x  | 7.3x  | 6.2x                        | -                                     | <div></div> | -     |
| Fiat Chrysler Automobiles N.V.     | BIT:FCA         | 20.33                       | 81.7%                   | 31,505          | 38,273     | 2.8x            | 2.1x  | 2.1x  | 6.6x                | 5.1x  | 4.8x  | 0.4x                        | -                                     | <div></div> | 13.6% |
| Ford Motor Company                 | NYSE:F          | 11.08                       | 82.2%                   | 44,244          | 172,169    | 12.7x           | 18.1x | 16.2x | 8.5x                | 7.0x  | 7.3x  | 9.7x                        | (11.3%)                               | <div></div> | -     |
| General Motors Company             | NYSE:GM         | 36.34                       | 77.7%                   | 50,895          | 126,788    | 5.7x            | 5.8x  | 6.0x  | 6.9x                | 5.7x  | 5.7x  | 3.7x                        | (11.3%)                               | <div></div> | -     |
| Honda Motor Co., Ltd.              | TSE:7267        | 34.46                       | 88.2%                   | 61,282          | 108,345    | 8.6x            | 8.1x  | 7.4x  | 10.8x               | NM    | NM    | 3.3x                        | -                                     | <div></div> | 0.6%  |
| Hyundai Motor Company              | KOSE:A005380    | 135.18                      | 82.9%                   | 27,991          | 73,808     | 9.7x            | 9.1x  | 8.6x  | 13.9x               | 7.9x  | 7.0x  | 5.3x                        | (7.6%)                                | <div></div> | -     |
| Peugeot S.A.                       | ENXTPA:UG       | 24.09                       | 93.0%                   | 21,520          | 18,835     | 2.7x            | 2.2x  | 2.1x  | 8.6x                | 8.0x  | 6.8x  | NM                          | -                                     | <div></div> | 18.4% |
| Renault SA                         | ENXTPA:RNO      | 121.35                      | 97.7%                   | 32,590          | 76,177     | 10.5x           | 9.0x  | 8.6x  | 7.3x                | 6.2x  | 6.1x  | 5.8x                        | -                                     | <div></div> | 20.5% |
| Tesla, Inc.                        | NASDAQGS:TSLA   | 266.13                      | 68.3%                   | 44,955          | 55,098     | NM              | NM    | 14.2x | NM                  | NM    | NM    | 294.5x                      | (14.5%)                               | <div></div> | -     |
| Toyota Motor Corporation           | TSE:7203        | 64.26                       | 87.4%                   | 186,989         | 330,661    | 9.5x            | 11.8x | 11.0x | 12.6x               | NM    | NM    | 3.7x                        | -                                     | <div></div> | 0.4%  |
| Volkswagen Aktiengesellschaft      | XTRA:VOW3       | \$ 198.82                   | 83.9%                   | \$ 100,328      | \$ 263,660 | 8.7x            | 6.2x  | 6.0x  | 8.0x                | 6.0x  | 5.7x  | 5.5x                        | (0.5%)                                | <div></div> | -     |
| Mean                               |                 |                             |                         |                 |            | 8.4x            | 8.3x  | 8.3x  | 9.2x                | 6.8x  | 6.5x  | 31.3x                       |                                       |             |       |
| Median                             |                 |                             |                         |                 |            | 9.5x            | 9.0x  | 8.6x  | 8.6x                | 7.0x  | 6.8x  | 5.5x                        |                                       |             |       |
| COMMERCIAL VEHICLES                |                 |                             |                         |                 |            |                 |       |       |                     |       |       |                             |                                       |             |       |
| Navistar International Corporation | NYSE:NAV        | \$ 34.97                    | 73.3%                   | \$ 3,451        | \$ 7,631   | 13.4x           | 9.6x  | 8.5x  | NM                  | 12.0x | 10.0x | 7.3x                        | (18.4%)                               | <div></div> | -     |
| Oshkosh Corporation                | NYSE:OSK        | 77.27                       | 77.1%                   | 5,768           | 6,222      | 9.2x            | 8.8x  | 8.4x  | 18.4x               | 14.4x | 12.9x | 0.8x                        | (15.0%)                               | <div></div> | -     |
| PACCAR Inc                         | NASDAQGS:PCAR   | 66.17                       | 83.0%                   | 23,298          | 28,653     | 10.8x           | 11.3x | 11.0x | 17.0x               | 12.2x | 11.8x | 2.6x                        | (6.9%)                                | <div></div> | -     |
| REV Group, Inc.                    | NYSE:REV        | 20.76                       | 62.6%                   | 1,341           | 1,700      | 11.6x           | 7.9x  | 6.7x  | NA                  | 11.8x | 9.4x  | 2.5x                        | (36.2%)                               | <div></div> | -     |
| Spartan Motors, Inc.               | NASDAQGS:SPAR   | 17.20                       | 93.7%                   | 604             | 587        | 20.7x           | 14.5x | 8.9x  | NM                  | 28.2x | 15.4x | NM                          | -                                     | <div></div> | 9.2%  |
| Wabash National Corporation        | NYSE:WNC        | 20.81                       | 78.4%                   | 1,200           | 1,560      | 9.0x            | 6.7x  | 6.7x  | 16.0x               | 10.6x | 9.9x  | 2.1x                        | (4.1%)                                | <div></div> | -     |
| Workhorse Group Inc.               | NASDAQCM:WKHS   | \$ 2.64                     | 54.0%                   | \$ 110          | \$ 113     | NM              | NM    | NM    | NM                  | NM    | NM    | -0.1x                       | -                                     | <div></div> | 3.1%  |
| Mean                               |                 |                             |                         |                 |            | 12.4x           | 9.8x  | 8.3x  | 17.1x               | 14.9x | 11.6x | 2.5x                        |                                       |             |       |
| Median                             |                 |                             |                         |                 |            | 11.2x           | 9.2x  | 8.4x  | 17.0x               | 12.1x | 10.9x | 2.3x                        |                                       |             |       |
| RENTAL                             |                 |                             |                         |                 |            |                 |       |       |                     |       |       |                             |                                       |             |       |
| Avis Budget Group, Inc.            | NASDAQGS:CAR    | \$ 46.84                    | 92.1%                   | \$ 3,798        | \$ 16,008  | 17.8x           | 20.7x | 19.4x | 23.4x               | 14.1x | 12.3x | 13.6x                       | -                                     | <div></div> | 6.7%  |
| Mean                               |                 |                             |                         |                 |            | 17.8x           | 20.7x | 19.4x | 23.4x               | 14.1x | 12.3x | 13.6x                       |                                       |             |       |
| Median                             |                 |                             |                         |                 |            | 17.8x           | 20.7x | 19.4x | 23.4x               | 14.1x | 12.3x | 13.6x                       |                                       |             |       |
| DEALERS                            |                 |                             |                         |                 |            |                 |       |       |                     |       |       |                             |                                       |             |       |
| America's Car-Mart, Inc.           | NASDAQGS:CRMT   | \$ 50.45                    | 97.7%                   | \$ 349          | \$ 501     | 11.4x           | 10.4x | 9.1x  | 17.4x               | 12.7x | 10.7x | 3.5x                        | -                                     | <div></div> | 13.0% |
| Asbury Automotive Group, Inc.      | NYSE:ABG        | 67.50                       | 88.4%                   | 1,412           | 3,102      | 9.4x            | 10.0x | 9.9x  | 10.2x               | 9.0x  | 8.6x  | 5.3x                        | -                                     | <div></div> | 5.5%  |
| AutoCanada Inc.                    | TSX:ACQ         | 17.25                       | 85.2%                   | 472             | 1,189      | 12.2x           | 12.9x | 10.9x | 15.7x               | 10.7x | 9.0x  | 7.2x                        | (4.1%)                                | <div></div> | -     |
| AutoNation, Inc.                   | NYSE:AN         | 46.78                       | 75.4%                   | 4,296           | 10,737     | 11.3x           | 11.2x | 11.0x | 12.6x               | 9.6x  | 9.1x  | 6.8x                        | (8.9%)                                | <div></div> | -     |
| Cars.com Inc.                      | NYSE:CARS       | 28.33                       | 87.8%                   | 2,036           | 2,594      | 13.0x           | 11.0x | 10.0x | 25.8x               | 15.7x | 13.6x | 2.8x                        | (1.8%)                                | <div></div> | -     |
| CarMax Inc.                        | NYSE:KMX        | 61.94                       | 79.8%                   | 11,202          | 24,179     | 18.4x           | 17.3x | 17.5x | 17.2x               | 14.3x | 14.8x | 10.0x                       | (3.4%)                                | <div></div> | -     |
| Carvana Co.                        | NYSE:CVNA       | 22.93                       | 92.1%                   | 447             | 828        | NM              | NM    | NM    | NM                  | NM    | NM    | -0.9x                       | -                                     | <div></div> | 19.9% |
| Group 1 Automotive, Inc.           | NYSE:GPI        | 65.34                       | 77.4%                   | 1,320           | 4,227      | 9.9x            | 11.5x | 11.2x | 8.7x                | 7.6x  | 7.3x  | 6.9x                        | (7.9%)                                | <div></div> | -     |
| Lithia Motors, Inc.                | NYSE:LAD        | 100.52                      | 78.5%                   | 2,515           | 5,424      | 11.5x           | 11.0x | 10.4x | 11.7x               | 9.4x  | 8.7x  | 6.9x                        | (11.5%)                               | <div></div> | -     |
| Penske Automotive Group, Inc.      | NYSE:PAG        | 44.33                       | 80.8%                   | 3,767           | 9,679      | 13.7x           | 12.7x | 12.4x | 11.1x               | 8.7x  | 8.4x  | 8.4x                        | (7.4%)                                | <div></div> | -     |
| Rush Enterprises, Inc.             | NASDAQGS:RUSH.B | 40.38                       | 76.5%                   | 1,675           | 3,023      | 10.0x           | 13.0x | 11.0x | 18.4x               | NM    | NM    | 4.4x                        | (16.2%)                               | <div></div> | -     |
| Sonic Automotive, Inc.             | NYSE:SAH        | \$ 18.95                    | 83.3%                   | \$ 804          | \$ 3,336   | 10.5x           | 11.2x | 11.1x | 9.5x                | 8.3x  | 8.4x  | 7.9x                        | -                                     | <div></div> | 2.7%  |
| Mean                               |                 |                             |                         |                 |            | 11.9x           | 12.0x | 11.3x | 14.4x               | 10.6x | 9.9x  | 5.8x                        |                                       |             |       |
| Median                             |                 |                             |                         |                 |            | 11.4x           | 11.2x | 11.0x | 12.6x               | 9.5x  | 8.9x  | 6.8x                        |                                       |             |       |

### WORLD VEHICLE MONTHLY SALES BY REGION

(Millions)



Source: WardsAuto

Source: Capital IQ, Company Filings

Notes:

(1) All values converted to USD at the exchange rate of the date above

(2) Definitions: LTM = Last Twelve Months; EBITDA = Earnings Before Interest, Taxes, Depreciation, and Amortization; P/E = Stock Price / Earnings Per Share



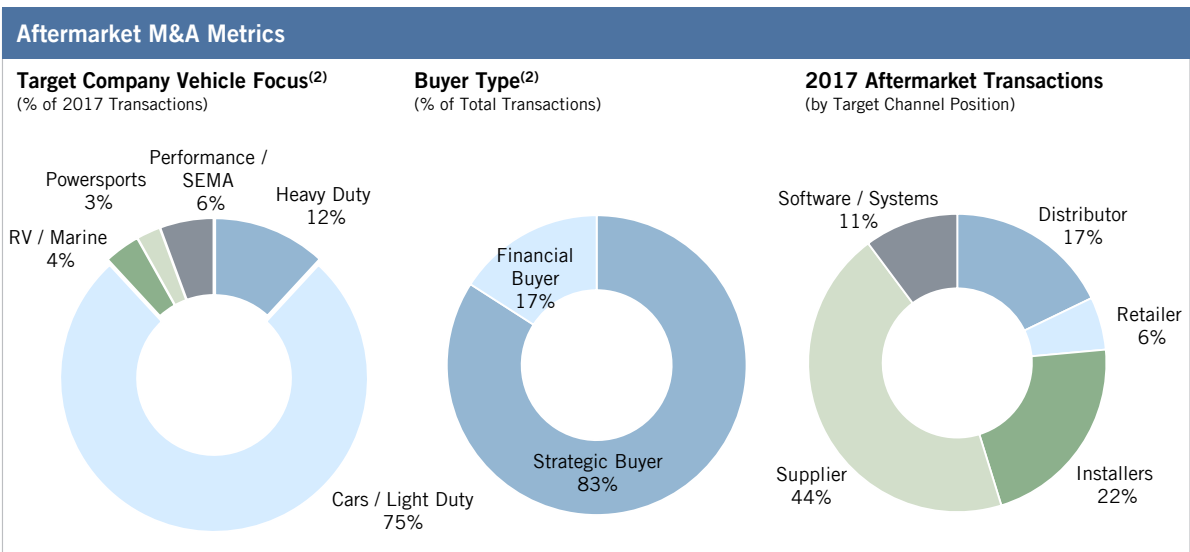
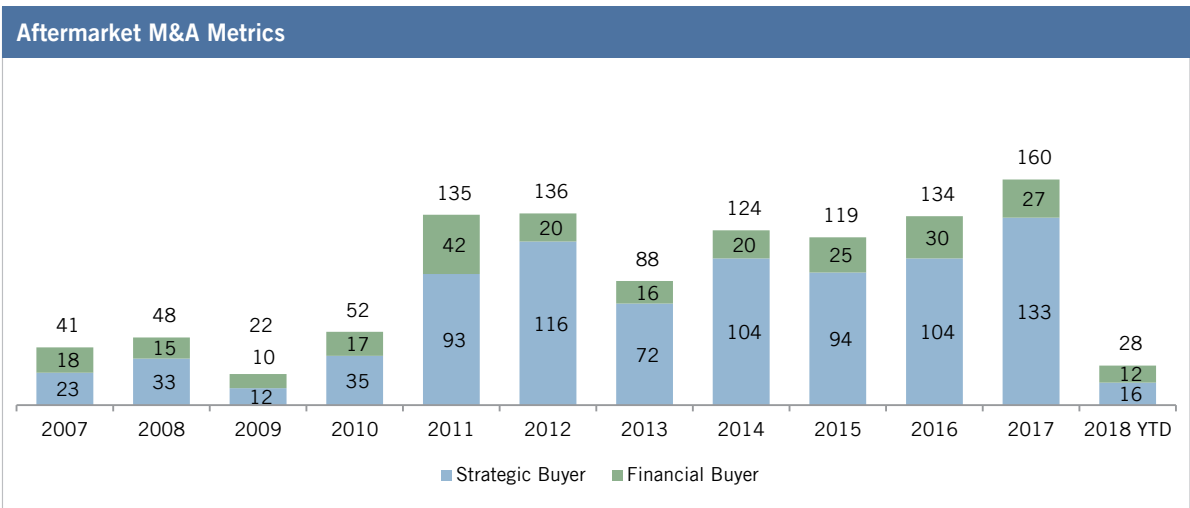
# Select Auto Care Transactions

## Recent Aftermarket M&A

### View from 30k Feet

2017 was another strong year for M&A transaction volume, with ~160 transactions occurring in North America and Europe. Six of the last seven years have posted over 100 M&A aftermarket transactions. The industry remains attractive to both strategic and financial buyers due to favorable industry tailwinds (e.g. growing and aging car parc, increasing vehicle utilization and miles driven, low fuel prices) and the presence of large and fragmented subsectors that are poised for consolidation. To complement this, the U.S. economy is healthy, disposable income is rising, and debt remains inexpensive. Strong macroeconomic fundamentals and attractive industry dynamics spurred increased activity in aftermarket M&A in 2017 compared to years prior.

In 2017, approximately 83% of transactions involved a strategic buyer<sup>(1)</sup>, a level of strategic involvement that is in line with the last five years' average. Of that 83%, approximately 40% of the acquirers were private equity-backed. Of deals completed in 2017, 37 had disclosed prices - 19 of which had total transaction value exceeding \$250 million. The average revenue and EBITDA multiples for these transactions were 1.2x and 10.2x, respectively.



Source: Jefferies Automotive Aftermarket database.  
(1) Includes private equity-owned strategic buyers.  
(2) Jefferies' internal estimates / tracking.

# Select Auto Care Transactions

## Select Automotive Aftermarket Transactions

| Close Date | Target Description  | Target  | Buyer  |
|------------|---|---|--|
| 4/12/2018  | Distributes aftermarket collision replacement parts in the United States  | KSI Trading Corp.   | Investcorp                                     |
| 4/10/2018  | Supplies branded automotive aftermarket wheels, performance tires, and accessories  | Wheel Pros  | Clearlake Capital                              |
| 4/4/2018   | Distributes OE quality import replacement parts, operating 26 locations across nine states  | Interamerican Motor Corporation                               | Parts Authority                                |
| 4/3/2018   | Supplies high-performance clutches and clutch products to the power sports market   | Rekluse Motor Sports  | Racing Winning Brands                          |
| 4/2/2018   | Supplies fragrance and appearance products for both home and auto use   | Kraco Enterprises (Air Care Assets)                           | Niteo Products                                 |
| 3/29/2018  | Merger of two of the largest major tire retailers and service providers in the United States  | Merger of Mavis Discount Tire and Express Oil                 | Golden Gate Capital                            |
| 3/26/2018  | Provides roadside assistance services in Canada and the United States   | Dominion Automobile Association                               | Allied Dispatch Solutions                      |
| 3/23/2018  | Supplies high-end aftermarket and OEM lighting products   | The Retrofit Source   | Kian Capital Partners                          |
| 3/22/2018  | Manufactures catalytic converters, headers, and exhaust systems   | PaceSetter Exhaust Systems                                    | Diversified Environmental Catalysts            |
| 3/22/2018  | Uniban is a Canada-based provider of vehicle glass repair and replacement services; P.H. is a distributor of auto windshields and windows | Uniban Canada & P.H. Vitres d 'Autos                          | Ridgemont Equity Partners                      |
| 3/13/2018  | 11-store tire retailer and maintenance service provider operating in Jacksonville, Florida  | Sun Tire Services   | Mavis Discount Tire                            |
| 3/9/2018   | Supplies turbochargers for light- and heavy-duty original equipment manufacturers   | Bosch Mahle Turbo Systems GmbH & Co. KG (nka:BMTS Automotive) | FountainVest Partners                          |
| 3/8/2018   | Operates a network of tire and wheel stores with an emphasis on heavy-duty work applications  | 7 Appalachian Tire Retail Stores                              | Monro (Public)                                 |
| 3/1/2018   | Provides vehicle glass repair and replacement services  | The J. N. Phillips Company                                    | CenterOak Partners                             |
| 2/27/2018  | Online retailer of automotive performance parts and accessories   | AutoAnything  | Kingswood Capital Management                   |
| 2/26/2018  | Jiffy Lube's largest franchisee, operating approximately 523 service centers across 26 states   | Heartland Automotive Services                                 | Wynnchurch Capital                             |
| 2/20/2018  | Operates four collision repair centers in Northern Ontario  | Regent Autobody   | The Boyd Group (Public)                        |
| 2/16/2018  | Designs and manufactures window and door systems for mobile and vehicular applications  | Hehr International  | LCI Industries (Public)                        |
| 2/7/2018   | Develops software focused on mobility and fleet management solutions  | STRATIM Systems Incorporated                                  | KAR Auction Services                           |
| 2/7/2018   | Provides vehicle glass repair and replacement services, operating more than 10 major brands   | Belron S.A. (Public)  | Clayton, Dubilier & Rice (Minority Investment) |
| 2/6/2018   | Remanufactures automotive drivetrain components   | ATC Drivetrain  | Crestview Partners                             |
| 2/1/2018   | Manufactures and sells safety and emergency products for trucks and trailers  | Safe Fleet Holdings   | Oak Hill Capital Partners                      |
| 1/31/2018  | Manufactures custom seats and accessories for off-road vehicles   | KAMM Industries   | Bestop   |
| 1/29/2018  | Provides glass repair and replacement services for automotive, residential, and commercial applications                                   | Mark's Mobile Glass (Wholesale division)                      | PWG Auto Glass                                 |
| 1/23/2018  | Manufactures high performance parts, serving the street and hot rod markets   | Chassis Engineering   | Hedits Hot Rod & Muscle Car Parts              |

Note: "Announced" transactions are not shown here.

# Select Auto Care Transactions

## Select Automotive Aftermarket Transactions (Cont.)

| Close Date | Target Description  | Target  | Buyer  |
|------------|---|---|--|
| 1/17/2018  | Operates 36 locations across Eastern Pennsylvania and New Jersey distributing parts to professional installers          | AutoParts Warehouse Inc. ("Eastern Warehouse Distributors")             | Parts Authority                                |
| 1/5/2018   | Supplies vehicle lighting and cleaning products in North America  | Tiger Accessory Group   | Hopkins Manufacturing Corporation              |
| 1/4/2018   | Provides vehicle glass repair and replacement services in Minnesota   | Harmon AutoGlass  | TechnaGlass                                    |
| 12/19/2017 | Provides car rental services at airports and tourist destinations in Spain, Italy, Portugal, Malta, Morocco and Andorra | Goldcar Spain   | Europcar Group                                 |
| 12/15/2017 | Supplies mission-critical vessel control systems to the leisure marine industry   | SeaStar Solutions   | Dometic Group AB (Public)                      |
| 12/5/2017  | Canadian-based installation franchising network specializing in auto glass, car, and truck accessories                  | Neuromage   | Uniban Canada                                  |
| 12/1/2017  | Provides business-to-business media and information services solutions to the automotive aftermarket                    | Professional Carwashing & Detailing                                     | Babcox Media                                   |
| 11/30/2017 | Designs, manufactures and distributes premium aftermarket powered vehicle performance packages                          | Tuscany Motor Coach   | Fox Factory (Public)                           |
| 11/30/2017 | Distributes aftermarket replacement parts and provides a variety of services  | Associate Jobbers Warehouse   | National Auto Parts Warehouse                  |
| 11/24/2017 | Fleet management operator providing services such as contract hire, contract purchase, and risk management              | Marshall Leasing  | N.I.L.B. Group Limited                         |
| 11/21/2017 | Supplies new and remanufactured turbochargers, cartridges, service kits and components                                  | ADP Distributors  | CARDONE Industries                             |
| 11/21/2017 | Develops software for passenger vehicle autonomous driving technologies   | nuTonomy  | Delphi Automotive PLC (nka:Aptiv PLC) (Public) |
| 11/20/2017 | Offers vehicle service and repair as well as tires and other related products   | 44 NTB Tire & Service Center Stores                                     | Western Automotive Ventures                    |
| 11/15/2017 | Designs, manufactures, and inspects performance racing engines  | Autotecnica Motori Srl  | TATUUS RACING s.r.l.                           |
| 11/9/2017  | Provides fully-automated tire inspection systems that check tire pressure, read, and vehicle weight                     | VENTECH Systems GmbH  | Goodyear Proactive Solutions (Public)          |
| 11/7/2017  | Provides wheel repair services to automotive dealers, professional installers, and individual consumers                 | Onsite Wheel Repair   | Alloy Wheel Repair Specialists                 |
| 11/2/2017  | Second largest parts distribution platform in Europe, with a focus on light vehicle and commercial replacement parts    | Alliance Automotive Holding   | Genuine Parts Company (Public)                 |
| 11/1/2017  | Network of service locations that engage in quick lube and inspection services for commercial trucks                    | Speedco   | Love's Travel Stops & Country Stores           |
| 11/1/2017  | Designs and manufactures automotive aftermarket and industrial accessories  | Warn Industries (Aftermarket Business) Keystone Automotive/LKQ (Public) |  |
| 10/31/2017 | Supplies aftermarket genuine and original equipment parts for heavy-duty trucks   | Class 8 Parts   | TruckPro                                       |
| 10/31/2017 | Supplies clutch and gear actuators throughout Germany   | FTE automotive GmbH   | Valeo SA (Public)                              |
| 10/27/2017 | Designs and engineers chassis, steering, suspension and alignment components for the automotive aftermarket             | MAS Automotive Distribution   | Dorman Products (Public)                       |
| 10/27/2017 | Develops and supplies branded aftermarket Jeep parts and accessories  | Omix-ADA  | Truck Hero                                     |
| 10/27/2017 | Operates nine collision repair centers in Nashville, Tennessee  | Auto Art Body Shop  | Gerber Collision & Glass (Public)              |
| 10/26/2017 | Develops online enterprise-level reporting solutions for automotive dealerships   | Dashboard Dealership Enterprises  | CDK Global (Public)                            |

Note: "Announced" transactions are not shown here.

# Select Auto Care Transactions

## Select Automotive Aftermarket Transactions (Cont.)

| Close Date | Target Description   | Target  | Buyer                               |
|------------|--|---|-------------------------------------|
| 10/10/2017 | Designs and manufactures lift kits and suspension systems for trucks and Jeeps                       | Superlift Suspension Systems  | Truck Hero                          |
| 10/4/2017  | Provides car washing services across 900 locations in Europe, Australia, and the United States       | International Car Wash Group  | Roark Capital Group                 |
| 10/2/2017  | Provides vehicle transmission repair and car services  | American Driveline Systems  | Icahn Enterprises                   |
| 10/2/2017  | 56 quick-lube locations in Michigan and Northern Ohio  | Henley Bluewater, Inc., 56 Stores in Michigan and Northern Ohio         | Valvoline (Public)                  |
| 9/26/2017  | Predictive analytics software platform that helps automotive dealerships increase sales              | automotiveMastermind  | IHS Markit (Public)                 |
| 9/19/2017  | Manufactures custom-fit protective automotive seat covers  | GT Covers   | Covercraft Industries               |
| 9/18/2017  | Distributes automotive replacement parts in Alberta, Canada to dealerships and independent garages   | Dash Distributors   | Uni-Select (Public)                 |
| 9/15/2017  | Distributes vehicle parts in the United Kingdom's Lancashire market to professional installers       | Blackburn Brakes  | The Parts Alliance                  |
| 9/14/2017  | Omni-channel retailer of boating gear, apparel, footwear, and other related accessories and products | West Marine   | Monomoy Capital Partners            |
| 9/13/2017  | Supplies aftermarket heavy-duty truck and trailer equipment  | Digraph Transport Supplies  | Euro Car Parts                      |
| 9/12/2017  | Chain of seven car wash locations in Huntsville, Alabama   | Car Wash Express  | Mister Car Wash                     |
| 9/11/2017  | Develops diagnostic equipment and software for air conditioning and exhaust applications             | Brain Bee S.p.A.  | MAHLE Aftermarket GmbH              |
| 9/8/2017   | Brand of OEM replacement diesel particulate filters and diesel oxidation catalysts                   | DuraFit, Private Label OEM Replacement DPF and DOC Product Line         | AP Exhaust Products                 |
| 9/6/2017   | Develops enterprise-desk software for car dealerships  | Autovance Technologies  | Quorum Information Technologies     |
| 9/5/2017   | Supplies custom off-road truck accessories   | Rolling Big Power   | Pilot Automotive                    |
| 9/5/2017   | Supplies genuine leather chamois products such as sponges and drying cloths                          | Acme Chamois  | Hopkins Manufacturing Corporation   |
| 8/30/2017  | Distributes heavy-duty truck equipment and trailer components  | Colton Truck Supply   | FleetPride                          |
| 8/29/2017  | Provides enterprise software applications to aftermarket and power sports dealerships                | ARI Network Services (Public)   | True Wind Capital                   |
| 8/23/2017  | Two corporate-owned Maaco locations in the Houston area  | Maaco Franchising, Inc., Two Maaco Locations Surrounding Houston, Texas | Cambridge Automotive Group          |
| 8/21/2017  | Develops Advanced Driver Assistance Systems and autonomous driving technologies                      | Mobiley N.V. (Public)   | Intel Corporation (Public)          |
| 8/9/2017   | Operates four collision repair centers in Calgary, Canada  | Concours Collision Centres  | The Boyd Group (Public)             |
| 8/7/2017   | Distributes automotive parts in the United Kingdom and Ireland                                       | The Parts Alliance  | Uni-Select Inc. (Public)            |
| 8/2/2017   | Manufactures air and liquid filtration products  | Kuss Filtration Inc. (nka:GVS Filtration Inc.)                          | GVS S.p.A.                          |
| 8/2/2017   | Supplies functional towing products and automotive accessories in New Zealand                        | Best Bars   | Horizon Global Corporation (Public) |
| 8/2/2017   | Designs and manufactures performance software tuning solutions                                       | APR   | Driven Performance Brands           |

Note: "Announced" transactions are not shown here.

# Select Auto Care Transactions

## Select Automotive Aftermarket Transactions (Cont.)

| Close Date | Target Description  | Target  | Buyer                              |
|------------|---|---|------------------------------------|
| 8/2/2017   | Designs and manufactures testing equipment for starters and alternators                             | D&V Electronics   | Motorcar Parts of America (Public) |
| 7/30/2017  | Chain of Speed Auto Service locations in Michigan   | UVR   | Monro (Public)                     |
| 7/28/2017  | Provides automotive services across more than 250 corporate-owned and franchised locations          | Precision Auto Care   | Icahn Automotive Group             |
| 7/27/2017  | Distributes commercial vehicle replacement parts across Europe                                      | EUROPART  | Alpha Group                        |
| 7/19/2017  | Manufactures, assembles, distributes, and retails energy storage products and automotive components | Metair Investments  | Somerset Capital Management        |
| 7/11/2017  | Designs and manufactures of trailer axles and running gear components                               | DexKo Global  | KPS Capital Partners               |
| 7/11/2017  | Distributes automotive paint, industrial coatings and autobody supplies                             | English COLOR and supply                                    | WestView Capital Partners          |
| 7/7/2017   | Provides mobile electrical automotive diagnostic services   | One Stop Mobile Solutions                                   | Repairify                          |
| 7/5/2017   | Distributes automotive replacement parts to professional service providers                          | Mainline Automotive Parts                                   | Parts Authority                    |
| 7/4/2017   | Operates 36 Company-owned collision repair centers in Ontario, Canada                               | Assured Automotive  | Boyd Group Income Fund (Public)    |
| 7/3/2017   | Four aftermarket distribution businesses in Belgium   | Portfolio of Four Aftermarket Parts Distribution Businesses | LKQ (Public)                       |
| 6/30/2017  | Manufactures thermal solutions for the automotive and wind power industries                         | Nissens A/S   | Axcel Management A/S               |
| 6/30/2017  | Manufactures and supplies of aftermarket air ride suspension products                               | Arnett Industries   | Calera Capital                     |
| 6/30/2017  | Supplies lift and leveling kits for off- and on-road trucks and Jeeps                               | Daystar Products International                              | Dubin Clark & Company              |
| 6/27/2017  | Distributes automotive, industrial, and architectural coatings throughout the United States         | Painters Supply & Equipment                                 | PNC Riverarch Capital              |
| 6/20/2017  | Provides data platform which enables on-board vehicle diagnostics and service tracking              | OOCAR SAS (Minority Investment)                             | Groupe Autodistribution            |
| 6/16/2017  | Manufactures truck toolboxes, transfer tanks, and truck accessories                                 | United Welding Services                                     | CURT Group                         |
| 6/15/2017  | Provides quick lube oil change and mechanical services in the Southeast United States               | Express Oil   | Golden Gate Capital                |
| 6/12/2017  | Auctioneer of used power sport vehicles for lenders and dealers across the United States            | Cycle Express   | Copart (Public)                    |
| 6/8/2017   | Supplies a suite of specialty chemical, professional car care brands                                | Cyclo Industries  | Niteo Products                     |
| 6/6/2017   | Provides online automotive parts catalog software and eCommerce solutions                           | TradeMotion   | The Reynolds and Reynolds Company  |
| 6/5/2017   | Develops intelligent data management software for the automotive insurance industry                 | Colimbra Holding B.V.                                       | Solera Holdings                    |
| 6/2/2017   | Manufactures dump truck bodies and trailers   | Truck Bodies & Equipment International                      | Federal Signal Corporation         |
| 6/1/2017   | Manufactures chemicals for the heavy-duty truck and automotive aftermarket                          | The Penray Companies  | Plz Aeroscience Corp.              |
| 5/30/2017  | Manufactures and sells suspension lift kits and accessories for trucks and Jeeps                    | Rough Country   | Gridiron Capital                   |

Note: "Announced" transactions are not shown here.



# Select Auto Care Transactions

## Select Automotive Aftermarket Transactions (Cont.)

| Close Date | Target Description   | Target  | Buyer                                      |
|------------|--|---|--|
| 5/30/2017  | Distributes auto parts for light- and medium-duty vehicles   | Hoffman Bros. Auto Electric                                   | Fisher Auto Parts                          |
| 5/29/2017  | Recycles used passenger vehicles and sells salvage automotive parts  | SEVP2A est une S.A.R.L.                                       | Alliance Automotive Group                  |
| 5/25/2017  | Distributes branded automotive parts in the United Kingdom   | BMS Superfactors  | The Parts Alliance                         |
| 5/22/2017  | Manufactures seating components for the marine, RV, transportation, medical and office furniture industries  | Lexington Seating Corporation, Marine and RV Seating Business | LCI Industries (Public)                    |
| 5/17/2017  | QuikStop Oilube operates ten service locations in Cincinnati, Ohio   | Specialty Automotive Services (QuikStop Oilube)               | Take 5 Oil Change                          |
| 5/15/2017  | Provides tire sales, and automotive repair and maintenance services  | Mathis Tire & Auto Service                                    | Pep Boys - Manny, Moe & Jack               |
| 5/11/2017  | Supplies aluminum wheels to the automotive aftermarket and European OEMs                                     | UNIWHEELS AG (Public)   | Superior Industries International (Public) |
| 5/10/2017  | Manufactures and supplies exhaust, emissions, brakes, and other undercar parts to the automotive aftermarket | Merger of AP Exhaust and Centric Parts                        | Harvest Partners / Audax Group             |
| 5/9/2017   | Manufactures superchargers and turbochargers for all-terrain vehicles  | Mountain Performance  | Straightline Performance                   |
| 5/8/2017   | Supplies promotional items, including air fresheners, electronics, and other vehicle accessories             | HandStands PROMO  | Private                                    |
| 5/4/2017   | Manufactures and supplies tools for torque tightening, measurement and calibration                           | Norbar Torque Tools Holdings                                  | Snap-on Incorporated                       |
| 5/1/2017   | Supplies commercial vehicle wheel end components throughout North America                                    | KIC Holdings  | Accuride Corporation                       |
| 4/28/2017  | Provides carwash services and equipment  | National Carwash Solutions                                    | AEA Investors                              |
| 4/27/2017  | Provides software and workflow tools for the collision repair industry                                       | CCC Information Services                                      | Advent International                       |
| 4/21/2017  | Designs, manufactures, and markets branded consumer accessories for new and used pickup trucks               | Truck Hero  | CCMP Capital Advisors                      |
| 4/20/2017  | Distributes aftermarket spare parts for vehicles and operates a network of ~800 garages                      | ADB (nka:Autodistribution Belux SPRL)                         | DOYEN AUTO - SA                            |
| 4/19/2017  | Online platform for auto auctions to buy used cars   | Carco Technologies  | KAR Auction Services (Public)              |
| 4/18/2017  | Provides connected car engine diagnostic solutions   | Automatic Labs  | Sirius XM Holdings (Public)                |
| 4/13/2017  | Supplies new, used, and remanufactured transmissions, transfer cases, and differentials                      | Zumbrota Bearing and Gear                                     | Randy's Ring & Pinion                      |
| 4/13/2017  | Provides upfit and custom solutions for sprinter vans and trucks   | Midwest Automotive Designs                                    | REV Group (Public)                         |
| 4/6/2017   | Manufactures and sells components for use in powertrain and safety-critical platforms                        | Metaldyne Performance Group (Public)                          | American Axle & Manufacturing (Public)     |
| 4/5/2017   | Refurbishes alloy wheels   | Supreme Wheels Direct   | BCA Marketplace (Public)                   |
| 4/3/2017   | Remanufactures automotive replacement parts including starters, alternators, and brake calipers              | BORG Automotive A/S   | Aktieselskabet Schouw & Co.                |
| 4/3/2017   | Designs and manufactures heavy-duty utility and industrial trailers  | Towmaster   | Monroe Truck Equipment                     |
| 4/3/2017   | Supplies mirrors and camera-enabled vision systems for heavy- and medium-duty trucks                         | Velvac  | The Eastern Company                        |

Note: "Announced" transactions are not shown here.

# Select Auto Care Transactions

## Select Automotive Aftermarket Transactions (Cont.)

| Close Date | Target Description   | Target  | Buyer                                    |
|------------|--|---|--|
| 3/28/2017  | Supplies oil and fluid extractors, and air pumps   | Kristus   | Hopkins Manufacturing Corporation        |
| 3/20/2017  | Designs and manufactures custom thermoformed components for the RV market                      | Medallion Plastics  | Patrick Industries (Public)              |
| 3/13/2017  | Distributes replacement tires primarily in Italy   | Fintyre S.p.A.  | Bain Capital Private Equity              |
| 3/13/2017  | Provides auto auction services to dealers and consigners                                       | Swift Auto Auction  | XLerate Group                            |
| 3/8/2017   | Distributes and retails auto parts at two locations in Illinois                                | Thompson Auto Supply  | Auto-Wares                               |
| 3/3/2017   | Designs, engineers, manufactures, and markets snowmobiles, ATVs, and RVs                       | Arctic Cat  | Textron (Public)                         |
| 3/1/2017   | Manufactures and distributes automotive glass in the United States and internationally to OEMs | Pittsburgh Glass Works  | Vitro, S.A.B. de C.V. (Public)           |
| 3/1/2017   | Manufactures and distributes aftermarket accessories for heavy-duty trucks                     | Roadworks Manufacturing   | Lund International                       |
| 2/28/2017  | Provides filtration products, filtration systems, and services worldwide                       | CLARCOR   | Parker-Hannifin (Public)                 |
| 2/28/2017  | Provides professional car care products and accessories  | Hi-Tech Industries  | Highlander Partners                      |
| 2/28/2017  | Distributes new and remanufactured auto parts in Ontario, Canada                               | Impact Auto Parts   | Uni-Select                               |
| 2/28/2017  | Provides vehicle repair, coating, and painting services  | Hi-Tec/Professional Paint and Auto Body Supply                        | Finishmaster                             |
| 2/15/2017  | Retails heavy-duty aftermarket truck parts   | Jack Lyons Truck Parts Of Ft. Myers                                   | TruckPro                                 |
| 2/14/2017  | Manufactures performance and racing pistons for the automotive and power sports markets        | Racing Winning Brands   | Dover Corporation; Kinderhook Industries |
| 2/13/2017  | Distributes replacement tires to independent retailers in the United Kingdom                   | Micheldever Tyre Services   | Sumitomo Rubber Industries (Public)      |
| 2/8/2017   | Provides car washing services at six locations in Grand Rapids, Michigan                       | Southland Enterprises   | Car Wash Partners                        |
| 2/7/2017   | Supplies automotive and commercial truck replacement parts to repairers and resellers          | Hellaby Holdings  | Bapcor Limited (Public)                  |
| 2/7/2017   | Manufactures blinds and screens for the leisure marine and super yacht industry                | Oceanair Marine   | Dometic Group AB (Public)                |
| 2/6/2017   | Remanufactures brake calipers for the automotive aftermarket                                   | King Kalipers   | BBB Industries                           |
| 2/2/2017   | Retails vehicle parts and accessories, operating as a car accessory dealership                 | Torshov Bilrekvisita AS   | T. Hansen Gruppen A/S                    |
| 2/2/2017   | Manufactures and supplies pre-manufactured electrical systems to the marine industry           | Marine Digital Integrators  | SeaStar Solutions                        |
| 2/1/2017   | Manufactures brakes and actuators for the marine industry                                      | Tie Down Engineering, Inc., Axle, Brake and Actuation Business Assets | Dexter Axle Company                      |
| 1/27/2017  | #3 auction house of new and used cars in the U.S.  | auction broadcasting company  | America's Auto Auction                   |
| 1/26/2017  | Produces and supplies technical information for the automotive aftermarket worldwide           | Autodata Publishing Group   | Solera Holdings                          |
| 1/24/2017  | Designs, engineers, and manufactures wheels for racing cars and trucks                         | Weld Racing   | Momo USA                                 |

Note: "Announced" transactions are not shown here.

# Select Auto Care Transactions

## Select Automotive Aftermarket Transactions (Cont.)







| Close Date | Target Description  | Target  | Buyer                         |
|------------|---|---|-------------------------------|
| 1/23/2017  | Provides maintenance and repair services with a focus on brake services                                   | JBRE, LLC (Just Brakes)   | Pep Boys - Manny, Moe & Jack  |
| 1/18/2017  | Supplies various components, accessories, and systems to manufacturers and services of vehicles worldwide | Federal-Mogul Holdings Corporation (nka:Federal-Mogul Holdings) | Icahn Enterprises             |
| 1/18/2017  | Develops automotive software, digital image processing solutions, and three-dimensional sensor technology | Autonomos GmbH  | TomTom N.V.                   |
| 1/17/2017  | Distributes industrial and automotive paint and supplies  | Blaise of Color Inc. / Crown Auto Body Supply                   | Finishmaster                  |
| 1/11/2017  | Wholesales auto parts in Minnesota, North Dakota, South Dakota, and Montana with 22 branch locations      | Hedahls   | Automotive Parts Headquarters |
| 1/10/2017  | Distributes rotating electrical units and parts for OEM starters and alternators                          | J&N Auto Electric   | Arrowhead Electrical Products |
| 1/6/2017   | Designs, engineers, develops and products components in the OEM and performance aftermarket industries    | Ingalls Engineering   | Dorman Products (Public)      |
| 1/5/2017   | Provides vehicle transmission repair and auto car services  | American Driveline Systems                                      | Transom Capital Group         |
| 1/4/2017   | Provides on-site fleet repair and maintenance services for commercial trucks and trailers                 | Desert Fleet-Serv   | The W.W. Williams Company     |
| 1/4/2017   | Wholesales replacement tires in San Antonio, Texas  | Wellborn Tire   | U.S. AutoForce                |

Note: "Announced" transactions are not shown here.

# Select Auto Care Transactions

## Jefferies Automotive Aftermarket Transactions

**Dedicated Automotive Aftermarket Franchise With Extensive Transaction Experience**  
**Leading Investment Bank To The Automotive Aftermarket**

|   |  |  |   |   |  |
|---|--|--|---|---|--|
| <p>April 2018</p>  <p><b>\$540,000,000</b></p> <p>Credit Facility<br/>Joint Lead Arranger</p>  | <p>April 2018</p>  <p>A portfolio company of<br/>One Rock Capital Partners</p> <p><b>Undisclosed</b></p> <p>Sale to<br/>L Catterton</p> <p>Lead Financial Advisor</p> | <p>April 2018</p>  <p>A portfolio company of<br/>Roark Capital Group</p> <p><b>\$544,000,000</b></p> <p>Credit Facility<br/>Joint Lead Arranger</p>         | <p>April 2018</p>  <p><b>Undisclosed</b></p> <p>Sale of<br/>Interamerican Motor Corporation<br/>to Parts Authority a portfolio<br/>company of<br/>The Jordan Company</p> <p>Sole Financial Advisor</p> | <p>March 2018</p>  <p><b>\$1,910,000,000</b></p> <p>Credit Facility to Finance Merger with<br/>Express Oil Change &amp; Tire Engineers</p> <p>Joint Lead Arranger</p> | <p>March 2018</p>  <p>A portfolio company of<br/>ONCAP</p> <p><b>Undisclosed</b></p> <p>Merger with<br/>Express Oil Change &amp; Tire Engineers,<br/>a portfolio company of<br/>Golden Gate Capital</p> <p>Sole Financial Advisor</p> |
| <p>December 2017</p>  <p>A portfolio company of<br/>Leonard Green &amp; Partners</p> <p><b>\$491,000,000</b></p> <p>Credit Facility<br/>Sole Lead Arranger</p> | <p>December 2017</p>  <p>A portfolio company of<br/>Olympus Partners</p> <p><b>\$235,000,000</b></p> <p>Credit Facility<br/>Sole Lead Arranger</p>                    | <p>November 2017</p>  <p>A portfolio company of<br/>KKR</p> <p><b>\$1,530,000,000</b></p> <p>Credit Facility<br/>Joint Lead Arranger</p>                    | <p>October 2017</p>  <p><b>Undisclosed</b></p> <p>Sale to<br/>Truck Hero</p> <p>Sole Financial Advisor</p>   | <p>September 2017</p>  <p><b>\$725,000,000</b></p> <p>Credit Facility to Finance<br/>Acquisition by Roark Capital<br/>Group</p> <p>Joint Lead Arranger</p>            | <p>September 2017</p>  <p><b>\$500,000,000</b><br/>+\$57,000,000 (Earn-out)</p> <p>Sale to<br/>IHS Markit Ltd.</p> <p>Sole Financial Advisor</p>  |
| <p>August 2017</p>  <p><b>£205,000,000</b></p> <p>Acquisition of<br/>The Parts Alliance Group</p> <p>Sole M&amp;A Advisor</p>                                  | <p>July 2017</p>  <p><b>CAD\$ 193,600,000</b></p> <p>Sale to<br/>The Boyd Group Inc.</p> <p>Sole Financial Advisor</p>  | <p>June 2017</p>  <p>A portfolio company of<br/>Leonard Green &amp; Partners</p> <p><b>\$474,000,000</b></p> <p>Credit Facility<br/>Joint Lead Arranger</p> | <p>May 2017</p>  <p><b>Undisclosed</b></p> <p>Recapitalization by Audax Private Equity and<br/>Harsco Partners to form<br/>APC Automotive Technologies</p> <p>Sole Financial Advisor</p>               | <p>April 2017</p>  <p>A portfolio company of<br/>TA Associates</p> <p><b>Undisclosed</b></p> <p>Sale to<br/>CCMP Capital Advisors</p> <p>Lead Financial Advisor</p>   | <p>February 2017</p>  <p>A portfolio company of<br/>OMERS Private Equity</p> <p><b>Undisclosed</b></p> <p>Minority Sale to<br/>Leonard Green &amp; Partners</p> <p>Sole Financial Advisor</p>   |

## Uniquely Focused On The Automotive Aftermarket

### Suppliers

- Accessories
- Appearance
- Collision Parts
- Heavy Duty / Ag
- Performance
- Powersports
- Remanufacturers
- Recreational Vehicle
- Specialty Chemicals & Lubricants
- Specialty Products
- Systems Technology Providers
- Tires / Wheels
- Tools & Equipment
- Traditional Hard Parts
- Truck / Jeep / Off-Road

### Parts Distributors

- Accessories
- Broadline WD's / Jobbers
- Collision (PBE)
- Commercial Distributors (DIFM)
- Heavy Duty / Ag
- Marine
- OES Distributors
- Performance
- Powersports
- Recreational Vehicle
- Specialty Chemicals
- Tire / Wheel Distributors
- Tool & Equipment
- Truck / Jeep / Off-Road
- Whole Car / Salvage Vehicle Auctions

### Parts Retailers

- Catalog / Direct Marketers
- Heavy Duty / Ag
- Mass Merchants
- Online Retailers
- Performance
- Powersports
- Recreational Vehicles
- Traditional Auto Parts
- Truck / Jeep / Off-Road
- Used Car Dealers

### Retail Service Providers

- Accessories
- Car Dealers
- Collision Repair
- Franchisors
- Heavy Duty / Ag Service
- Large Franchisee Groups
- Mechanical Repair
- Paint & Body Work
- Performance
- Powersports
- Quick Lube
- Repair / Maintenance
- Tire Retailers
- Truck / Jeep / Off-Road
- Warehouse Club

Clients First—Always<sup>SM</sup>

Jefferies

# Select Auto Care Transactions

## Jefferies Global Automotive Aftermarket Practice

### Leading Investment Bank To The Global Automotive Aftermarket

#### Jefferies LLC Overview

- Jefferies is a global full-service investment banking firm
- In-depth industry expertise
  - Senior level experience and attention
  - Best-in-class execution across the full range of client solutions
- Investment banking, sales, trading and research presence across the United States, Europe and Asia
- Serving clients for over 50 years
- Offices in 30 cities worldwide
- 3,500 employees, including 800 in Europe and 275 in Asia
- \$41 billion in assets, \$3.3 billion in LTM revenue
- Over 800 investment bankers
- 210 Managing Directors, having investment banking experience averaging 20 years
- Repeat Clients: 64% of our transactions and 78% of our revenue

#### Jefferies Principal Offices – 30 Cities Worldwide



#### US M&A Advisory < \$1B

US Ranking by Number of Transactions Completed  
January 1, 2015 to Present

| Financial Advisor | Deals      |
|-------------------|------------|
| <b>Jefferies</b>  | <b>314</b> |
| Goldman Sachs     | 310        |
| JP Morgan         | 310        |
| Piper Jaffray     | 270        |
| Raymond James     | 245        |
| Morgan Stanley    | 231        |
| William Blair     | 226        |
| Barclays          | 216        |
| Lazard            | 213        |
| Robert Baird      | 197        |

#### US Leveraged Loans

US Ranking by Issuances  
January 1, 2014 to Present

| Arranger         | Issues     |
|------------------|------------|
| Credit Suisse    | 274        |
| <b>Jefferies</b> | <b>252</b> |
| Bank of America  | 214        |
| RBC Capital      | 198        |
| Goldman Sachs    | 187        |
| Deutsche Bank    | 166        |
| Barclays         | 159        |
| Antares          | 158        |
| JP Morgan        | 139        |
| Morgan Stanley   | 135        |

#### US Equity Issuance

US Ranking by Number of Bookrun Transactions  
January 1, 2016 to Present

| Bookrunner       | Deals     |
|------------------|-----------|
| <b>Jefferies</b> | <b>76</b> |
| JP Morgan        | 66        |
| Stifel           | 58        |
| Cowen            | 55        |
| Piper Jaffray    | 53        |
| Citi             | 46        |
| Morgan Stanley   | 46        |
| Credit Suisse    | 45        |
| Wells Fargo      | 44        |
| RBC Capital      | 43        |

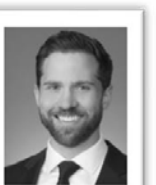
#### Global Automotive Aftermarket Investment Banking Team



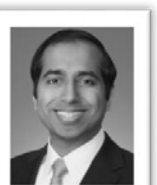
**Rex Green**  
Managing Director  
Global Co-Head



**Jonathan Carey**  
Managing Director  
Global Co-Head



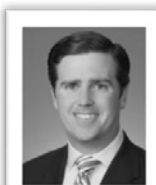
**Treavor Hill**  
Senior  
Vice President



**Yogesh Punjabi**  
Vice President



**Matthew Grau**  
Vice President



**Jack Walsh**  
Associate



**Vinod Nimmagadda**  
Associate

Source: Dealogic, rankings based on full-service investment banks only (M&A Advisory: ≤ \$1B in TEV, Leveraged Loans ≤ \$500M in size, and Equity Issuance ≤ \$750M in market capitalization). For Important Disclosure information, please visit our website at <http://www.jefferies.com/FooterPages/2w/196> or call 212.284.2300.  
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# Auto Care Industry

in this section

## **Consumer Profile**

Demographic profile of DIY and DIFM consumers including data on gender, age, income and vehicle characteristics

## **IMR Insights**

### **Reasons Consumers Choose DIY and DIFM Outlets**

### **DIY Propensity and Shop Averages**

- Shop Demographics
- Shop Purchase Channels

### **Replacement Rates For Motor Vehicle Parts And Jobs**

Detailed replacement rate data for automotive parts and services. Also includes graphical representations of the top 10 replacement rate components by vehicle age group

### **Delayed Maintenance**

# Consumer Profile–DIY

This section provides insight into the demographics of the do-it-yourself (DIY) consumer who purchases auto care parts and components for the purpose of performing maintenance and repairs to their vehicle. The following is a breakdown of their gender, age, education, occupation, household income, miles driven, vehicle type and average vehicle age.

The typical DIY consumer, who purchases from an auto parts store, is a head of the household or a single male, between the ages of 30 and 39 with some college education. He is a blue-collar employee and has an annual household income between \$30,000 and \$49,999. The car he drives is older than 15 years and has more than 150,000 miles on the odometer.

## DIY Demographics

| Question                       | Answer               | Grand Total | Auto Parts Retailer | Discount Store-Mass Merchandiser |
|--------------------------------|----------------------|-------------|---------------------|----------------------------------|
| <b>Grand Total</b>             |                      | 100.0%      | 100.0%              | 100.0%                           |
| <b>Household Type</b>          | Family               | 60.3%       | 60.4%               | 54.1%                            |
|                                | Single Male          | 27.8%       | 27.4%               | 31.1%                            |
|                                | Single Female        | 12.0%       | 12.2%               | 14.8%                            |
| <b>Age Range</b>               | Under 30             | 19.2%       | 18.7%               | 15.0%                            |
|                                | 30-39                | 28.4%       | 27.4%               | 24.9%                            |
|                                | 40-49                | 19.7%       | 21.8%               | 19.0%                            |
|                                | 50-59                | 14.1%       | 14.6%               | 17.1%                            |
|                                | 60 and Over          | 18.6%       | 17.6%               | 24.0%                            |
| <b>Household Income</b>        | Under \$10,000       | 4.6%        | 5.0%                | 4.3%                             |
|                                | \$10,000 to \$14,999 | 4.6%        | 5.2%                | 4.3%                             |
|                                | \$15,000 to \$19,999 | 5.4%        | 5.5%                | 4.8%                             |
|                                | \$20,000 to \$24,999 | 6.5%        | 7.6%                | 6.0%                             |
|                                | \$25,000 to \$29,999 | 7.9%        | 8.7%                | 7.1%                             |
|                                | \$30,000 to \$49,999 | 20.1%       | 22.2%               | 21.2%                            |
|                                | \$50,000 to \$74,999 | 20.3%       | 20.3%               | 20.6%                            |
|                                | \$75,000 to \$99,999 | 14.6%       | 12.9%               | 15.3%                            |
| <b>Miles on Vehicle</b>        | \$100,000 and Over   | 15.9%       | 12.6%               | 16.3%                            |
|                                | 0 - 49,999           | 20.8%       | 15.8%               | 20.1%                            |
|                                | 50,000 - 99,999      | 22.7%       | 22.0%               | 24.7%                            |
|                                | 100,000 - 149,999    | 23.6%       | 25.7%               | 24.3%                            |
| <b>Vehicle Type</b>            | 150,000 +            | 32.9%       | 36.4%               | 30.8%                            |
|                                | Car                  | 43.3%       | 40.7%               | 42.9%                            |
|                                | SUV                  | 29.8%       | 29.9%               | 29.8%                            |
|                                | Pickup               | 19.7%       | 22.0%               | 18.4%                            |
| <b>Vehicle Age</b>             | Van                  | 7.2%        | 7.5%                | 8.9%                             |
|                                | New                  | 0.5%        | 0.2%                | 0.3%                             |
|                                | 1 Year Old           | 2.6%        | 1.5%                | 2.0%                             |
|                                | 2 Years Old          | 4.2%        | 2.9%                | 4.2%                             |
|                                | 3 Years Old          | 4.7%        | 3.8%                | 5.0%                             |
|                                | 4 Years Old          | 4.5%        | 3.9%                | 5.4%                             |
|                                | 5 Years Old          | 4.2%        | 3.9%                | 4.7%                             |
|                                | 6 Years Old          | 3.9%        | 3.3%                | 4.6%                             |
|                                | 7 Years Old          | 4.1%        | 3.9%                | 4.4%                             |
|                                | 8 Years Old          | 3.4%        | 3.2%                | 3.9%                             |
|                                | 9 Years Old          | 4.2%        | 4.1%                | 4.8%                             |
|                                | 10 Years Old         | 5.0%        | 5.2%                | 5.6%                             |
|                                | 11 Years Old         | 5.3%        | 5.6%                | 5.8%                             |
|                                | 12 Years Old         | 5.8%        | 6.5%                | 6.0%                             |
|                                | 13 Years Old         | 5.8%        | 6.4%                | 6.3%                             |
|                                | 14 Years Old         | 5.8%        | 6.2%                | 6.1%                             |
|                                | 15 Years Old & Older | 36.1%       | 39.3%               | 31.2%                            |
| <b>Education</b>               | Some College or Less | 66.3%       | 72.8%               | 63.5%                            |
|                                | College Graduate     | 33.7%       | 27.2%               | 36.5%                            |
| <b>Industry where Employed</b> | White Collar         | 39.4%       | 35.7%               | 42.5%                            |
|                                | Blue Collar          | 37.7%       | 40.2%               | 33.7%                            |
|                                | Other                | 23.0%       | 24.1%               | 23.8%                            |

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# Consumer Profile–DIFM

This section provides insight into the demographics of the Do-It-For-Me (DIFM) consumer who engages the services of a professional for repair, maintenance and installation work to their vehicle. The following is a breakdown of their gender, age, education, occupation, household income, miles driven, vehicle type and average vehicle age.

The typical aftermarket DIFM consumer, who gets his vehicle serviced at an independent repair shop, is a head of the household or a single male, 60 years of age or older, and is a college graduate or has some college education. He is a white-collar employee with an annual household income of between \$50,000 and \$74,999. The car he drives is fairly new and has less than 100,000 miles on the odometer.

The affluent older driver gets his car serviced at a new car dealership. This customer is either a single man or the head of the household with an annual income of over \$100,000. He is a college graduate with a white-collar job. His car is less than three years old, with fewer than 100,000 miles on the odometer.

## DIFM Demographics

|                         |                      | Grand Total | Outlet      |                |
|-------------------------|----------------------|-------------|-------------|----------------|
| Question                | Answer               |             | Aftermarket | New Car Dealer |
| Grand Total             |                      | 100.0%      | 100.0%      | 100.0%         |
| Household Type          | Family               | 51.3%       | 34.5%       | 56.0%          |
|                         | Single Male          | 26.1%       | 39.4%       | 22.4%          |
|                         | Single Female        | 22.6%       | 26.1%       | 21.6%          |
| Age Range               | Under 30             | 12.2%       | 5.9%        | 14.0%          |
|                         | 30-39                | 24.1%       | 13.2%       | 27.1%          |
|                         | 40-49                | 16.1%       | 13.8%       | 16.8%          |
|                         | 50-59                | 15.9%       | 16.6%       | 15.7%          |
|                         | 60 and Over          | 31.7%       | 50.5%       | 26.4%          |
| Household Income        | Under \$10,000       | 2.5%        | 0.8%        | 2.9%           |
|                         | \$10,000 to \$14,999 | 2.8%        | 1.2%        | 3.3%           |
|                         | \$15,000 to \$19,999 | 3.4%        | 1.5%        | 3.9%           |
|                         | \$20,000 to \$24,999 | 4.7%        | 2.8%        | 5.2%           |
|                         | \$25,000 to \$29,999 | 5.5%        | 3.4%        | 6.1%           |
|                         | \$30,000 to \$49,999 | 17.9%       | 15.5%       | 18.6%          |
|                         | \$50,000 to \$74,999 | 21.9%       | 23.6%       | 21.5%          |
|                         | \$75,000 to \$99,999 | 18.5%       | 19.8%       | 18.1%          |
|                         | \$100,000 and Over   | 22.8%       | 31.5%       | 20.4%          |
| Miles on Vehicle        | 0 - 49,999           | 30.9%       | 49.0%       | 25.5%          |
|                         | 50,000 - 99,999      | 29.6%       | 31.8%       | 28.9%          |
|                         | 100,000 - 149,999    | 21.2%       | 12.9%       | 23.6%          |
|                         | 150,000 +            | 18.4%       | 6.3%        | 22.0%          |
| Vehicle Type            | Car                  | 51.0%       | 51.2%       | 51.0%          |
|                         | SUV                  | 31.5%       | 33.7%       | 30.9%          |
|                         | Pickup               | 10.4%       | 8.7%        | 10.9%          |
|                         | Van                  | 7.1%        | 6.5%        | 7.3%           |
| Vehicle Age             | New                  | 0.6%        | 35.6%       | 64.0%          |
|                         | 1 Year Old           | 4.6%        | 47.2%       | 52.8%          |
|                         | 2 Years Old          | 7.6%        | 44.5%       | 55.5%          |
|                         | 3 Years Old          | 7.9%        | 37.5%       | 62.5%          |
|                         | 4 Years Old          | 7.3%        | 37.1%       | 62.8%          |
|                         | 5 Years Old          | 6.7%        | 35.1%       | 64.8%          |
|                         | 6 Years Old          | 5.6%        | 29.7%       | 70.3%          |
|                         | 7 Years Old          | 5.5%        | 24.8%       | 75.2%          |
|                         | 8 Years Old          | 4.2%        | 23.6%       | 76.4%          |
|                         | 9 Years Old          | 5.4%        | 22.8%       | 77.2%          |
|                         | 10 Years Old         | 5.5%        | 18.2%       | 81.7%          |
|                         | 11 Years Old         | 5.5%        | 16.0%       | 84.0%          |
|                         | 12 Years Old         | 5.6%        | 14.1%       | 85.9%          |
|                         | 13 Years Old         | 4.9%        | 11.9%       | 88.1%          |
|                         | 14 Years Old         | 4.2%        | 9.4%        | 90.6%          |
|                         | 15 Years Old & Older | 19.0%       | 6.2%        | 93.7%          |
| Education               | College Graduate     | 52.1%       | 59.6%       | 50.0%          |
|                         | Some College or Less | 47.9%       | 40.4%       | 50.0%          |
| Industry where Employed | White Collar         | 56.0%       | 62.0%       | 54.2%          |
|                         | Blue Collar          | 23.4%       | 21.2%       | 24.0%          |
|                         | Other                | 20.7%       | 16.8%       | 21.8%          |

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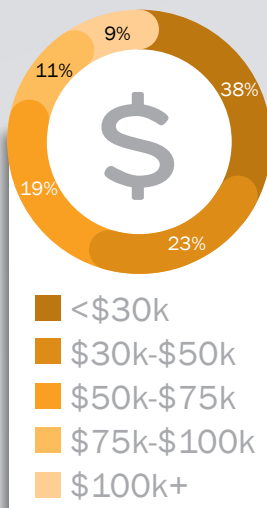
# IMR INSIGHT

## Understanding Millennial Light Maintenance DIYers

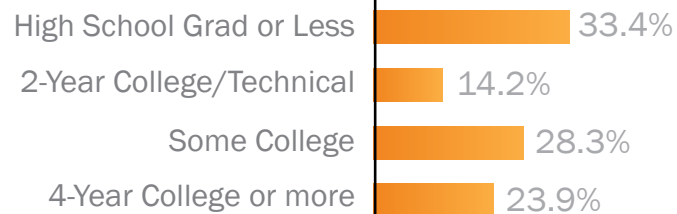
Millennials account for 28.7 percent of Do-It-Yourself (DIY) light maintenance repair purchases. As they've aged, their representation in this category of products has seen a five-year CAGR of 4.9 percent. The majority of those Millennial purchasers (50.2 percent) are married and 38.2 percent of those married couples have children. For the light maintenance category, they perform these repairs as DIYers at a rate of 58.8 percent which is consistent with the national average at 57.2 percent. However, reaching them tends to be different than DIYers in other age groups as their attitudes and opinions about media, brands and shopping are different.

### Understand

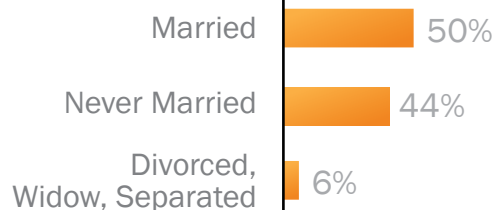
#### INCOME



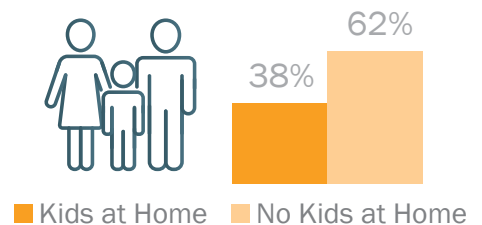
#### EDUCATION



#### MARITAL STATUS



#### MARRIED W/CHILDREN



### Find



43%



HOMEOWNERS



RURAL, METRO-MIX

# Engage

## INTERNET/SOCIAL MEDIA

- Internet use: 1st Quintile (heaviest)
- Spends an average of 20 hours or more a week on internet sites
- Spends an average of 3-4 hours or more a day on social networking sites
- Nearly twice as likely to trust the internet as a source of information than magazines or television

## SPORTS/LEISURE

- Past 30 days watched movies, TV shows and podcasts via a mobile device
- Attended college basketball and football games, pro-wrestling events and job fairs in past 12 months
- Shows little interest in NASCAR and NHRA drag racing while showing more interest in UFC, WWE and Monster Jam events.

## MEDIA CONSUMPTION



## Attitudes/Opinions

- Celebrity endorsement may influence buying product
- More likely to change brands often for variety/novelty than other age groups
- Less likely to believe buying American products is important
- Influenced by “What's Hot” and “What's Not”
- Enjoys being the center of attention and finds risk taking exciting
- Goal is to make it to the top of their profession

**IMR**Inc.

**Automotive  
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For more information about the IMR Insight “Understanding Millennial DIYers,” visit [www.automotiveresearch.com](http://www.automotiveresearch.com) or call 800-654-1079.



# Reasons Consumers Choose DIY and DIFM Outlets

When purchasing parts, DIY consumers selected auto parts retailers primarily because of good prior experience (33.0 percent), convenient location (27.5 percent) and their low prices (12.4 percent). By comparison, consumers selected discount/mass merchants for low prices (33.3 percent), convenient location (21.9 percent) and good prior experience 16.0 percent).

When having their vehicle serviced, DIFM consumers chose new car dealers for good prior experience (39.6 percent), trust in the store/shop and its personnel (18.7 percent) and convenient location (7.4 percent). By contrast, consumers selected aftermarket repair shops primarily because of good prior experience (41.7 percent), convenient location (14.6 percent) and trust in the store/shop and its personnel (8.7 percent).

## Why Chose A DIY Outlet

| DIY   | Grand Total | Auto Parts Retailer | Discount Store Mass Merchandiser |
|---|-------------|---------------------|----------------------------------|
| Good prior experience   | 26.9%       | 33.0%               | 16.0%                            |
| Convenient location   | 22.6%       | 27.5%               | 21.9%                            |
| Their low prices  | 18.6%       | 12.4%               | 33.3%                            |
| Fair prices   | 5.1%        | 3.9%                | 7.7%                             |
| Friend or family member's recommendation                          | 4.1%        | 2.9%                | 2.6%                             |
| They had other things i also needed to buy                        | 3.5%        | 2.6%                | 6.5%                             |
| My trust in the store\shop and its personnel                      | 3.3%        | 4.0%                | 1.1%                             |
| My loyalty to a particular store\shop                             | 2.6%        | 3.7%                | 1.0%                             |
| Other   | 2.6%        | 2.3%                | 2.7%                             |
| Large in-stock inventory  | 1.9%        | 1.7%                | 1.6%                             |
| Information on their website                                      | 1.7%        | 0.9%                | 0.9%                             |
| The brands of parts they offer                                    | 1.5%        | 1.1%                | 1.3%                             |
| The way they answered questions on the phone                      | 1.3%        | 0.7%                | 0.6%                             |
| Quick and easy checkout procedures                                | 1.2%        | 0.9%                | 0.8%                             |
| The warranty on the part  | 1.0%        | 1.1%                | 0.6%                             |
| The way they answered questions when i was in the store\shop      | 0.7%        | 0.4%                | 0.4%                             |
| Store layout and signs that make it easy to find what you need    | 0.6%        | 0.4%                | 0.5%                             |
| They would test my part for me                                    | 0.5%        | 0.3%                | 0.3%                             |
| Ability to help over the phone if i needed it during installation | 0.5%        | 0.2%                | 0.3%                             |

## Why Chose A DIFM Outlet

| DIFM  | Grand Total | New Car Dealer | Aftermarket Repair Shops |
|---|-------------|----------------|--------------------------|
| Good prior experience   | 41.3%       | 39.6%          | 41.7%                    |
| Convenient location   | 13.0%       | 7.4%           | 14.6%                    |
| My trust in the store\shop and its personnel                      | 10.9%       | 18.7%          | 8.7%                     |
| Their low prices  | 7.1%        | 2.2%           | 8.4%                     |
| Friend or family member's recommendation                          | 6.8%        | 1.7%           | 8.2%                     |
| My loyalty to a particular store\shop                             | 4.4%        | 7.2%           | 3.6%                     |
| Other   | 3.7%        | 9.0%           | 2.2%                     |
| The warranty on the part  | 2.7%        | 8.2%           | 1.2%                     |
| Fair prices   | 2.7%        | 1.4%           | 3.1%                     |
| They had other things i also needed to buy                        | 1.5%        | 1.4%           | 1.6%                     |
| Information on their website                                      | 1.0%        | 0.2%           | 1.3%                     |
| The way they answered questions on the phone                      | 1.0%        | 0.2%           | 1.2%                     |
| Quick and easy checkout procedures                                | 0.9%        | 0.5%           | 1.0%                     |
| The brands of parts they offer                                    | 0.8%        | 1.4%           | 0.6%                     |
| Large in-stock inventory  | 0.6%        | 0.3%           | 0.7%                     |
| The way they answered questions when i was in the store\shop      | 0.6%        | 0.2%           | 0.7%                     |
| They would test my part for me                                    | 0.4%        | 0.3%           | 0.4%                     |
| Store layout and signs that make it easy to find what you need    | 0.3%        | 0.1%           | 0.4%                     |
| Ability to help over the phone if i needed it during installation | 0.3%        | 0.1%           | 0.4%                     |

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# DIY Propensity and Shop Averages

## DIY Propensity

| Question                    | Answer   | Total % |
|-----------------------------|--|---------|
| Brake Repair                | Have performed and would consider doing again in the future      | 35.0%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 5.9%    |
| Computer & Emissions        | Have performed and would consider doing again in the future      | 12.6%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 10.6%   |
| Electrical Parts            | Have performed and would consider doing again in the future      | 39.2%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 8.6%    |
| Exhaust Parts               | Have performed and would consider doing again in the future      | 16.7%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 10.3%   |
| Filtration Parts            | Have performed and would consider doing again in the future      | 41.0%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 9.7%    |
| Lighter Engine Repair       | Have performed and would consider doing again in the future      | 32.6%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 8.6%    |
| Heavier Engine Repair       | Have performed and would consider doing again in the future      | 19.7%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 8.0%    |
| Lighter Maintenance Work    | Have performed and would consider doing again in the future      | 59.1%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 8.4%    |
| Heavier Maintenance Work    | Have performed and would consider doing again in the future      | 30.1%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 8.7%    |
| Steering & Suspension Parts | Have performed and would consider doing again in the future      | 16.3%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 9.4%    |
| Temperature Control Parts   | Have performed and would consider doing again in the future      | 17.9%   |
|                             | Have <u>not</u> performed but would consider doing in the future | 8.4%    |

## Shop Demographics

| Question                   | Answer | Year     |
|----------------------------|--------|----------|
|                            |        | 2017     |
| Average Number of Techs    | Mean   | 3.22     |
| Average ASE Cert. Techs    | Mean   | 2.49     |
| Average Number of Bays     | Mean   | 5.02     |
| Average Posted Labor Rate  | Mean   | \$86.00  |
| Average RO Dollar Value    | Mean   | \$343.54 |
| Average ROs Per Week       | Mean   | 47.30    |
| Vehicles Serviced Per Week | Mean   | 47.65    |
| Percent Serviced: Domestic | Mean   | 51.2%    |
| Percent Serviced: Asian    | Mean   | 29.5%    |
| Percent Serviced: European | Mean   | 19.3%    |

## Shop Purchase Channels

| Question                                       | Answer          | Year   |
|--|-----------------|--------|
|  |                 | 2017   |
| First Call Supplier                            | WDs             | 48.7%  |
|  | Retailers       | 41.7%  |
|  | Other Suppliers | 7.2%   |
|  | Dealerships     | 2.4%   |
|  | Total           | 100.0% |
| Percent of Parts Bought from 1st Call Supplier |                 | 71.1%  |

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# Replacement Rates for Motor Vehicle Parts and Jobs

Replacement rates reflect the percent of cars that had a relevant part replaced or service performed during the year. Vehicle age has a significant impact on the rate at which different components are replaced. Newer vehicles typically do not experience component failure to the same extent as older vehicles, while vehicles in an intermediate age range often require much more maintenance and repair as their mileage increases. Vehicles in the oldest group also need work, but owners tend to avoid non-essential repairs and therefore, rates decline.

## Replacement Rates by Vehicle Age, 2017

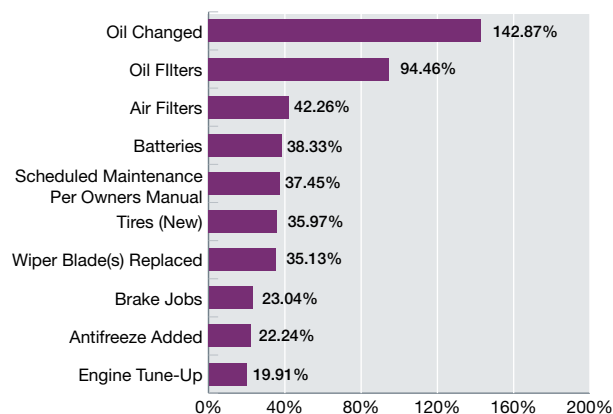
|   | Total Sample | 0-3     | 4-7     | 8-11    | 12+     |
|---|--------------|---------|---------|---------|---------|
| AC Compressors                          | 7.60%        | 9.13%   | 6.77%   | 4.93%   | 8.47%   |
| AC Condensers                           | 2.27%        | 2.85%   | 2.09%   | 1.64%   | 2.33%   |
| AC Evaporators                          | 1.11%        | 1.56%   | 1.02%   | 0.75%   | 1.05%   |
| AC Recharged                            | 4.70%        | 1.86%   | 3.24%   | 5.87%   | 6.99%   |
| AC Tubes/Hoses Replaced                 | 1.28%        | 0.79%   | 1.13%   | 1.43%   | 1.65%   |
| AC/Heater Blowers                       | 1.04%        | 0.74%   | 0.77%   | 1.02%   | 1.40%   |
| Air Conditioner Repaired                | 10.93%       | 12.98%  | 9.88%   | 7.55%   | 11.94%  |
| Air Filters                             | 42.26%       | 37.81%  | 52.99%  | 46.58%  | 36.85%  |
| Alternators                             | 4.13%        | 2.34%   | 2.46%   | 4.04%   | 6.36%   |
| Antifreeze Added                        | 22.24%       | 10.93%  | 17.82%  | 23.09%  | 31.82%  |
| Ball Joints                             | 3.08%        | 1.52%   | 1.72%   | 3.04%   | 4.94%   |
| Batteries                               | 38.33%       | 25.44%  | 40.31%  | 38.96%  | 45.39%  |
| Battery Cables                          | 4.64%        | 4.04%   | 3.96%   | 3.58%   | 5.95%   |
| Brake ABS Module                        | 2.35%        | 2.92%   | 1.83%   | 1.60%   | 2.67%   |
| Brake Calipers                          | 3.96%        | 1.15%   | 3.15%   | 4.58%   | 6.01%   |
| Brake Drums                             | 2.81%        | 0.91%   | 2.51%   | 3.66%   | 3.84%   |
| Brake Fluid Flush                       | 3.98%        | 2.50%   | 3.87%   | 4.17%   | 4.95%   |
| Brake Jobs                              | 23.04%       | 7.99%   | 24.38%  | 29.41%  | 29.23%  |
| Brake Master Cylinders                  | 0.98%        | 0.51%   | 0.75%   | 0.72%   | 1.54%   |
| Brake Rotors                            | 12.62%       | 3.81%   | 13.30%  | 16.96%  | 16.00%  |
| Brake Safety Inspection                 | 3.72%        | 2.49%   | 4.52%   | 5.03%   | 3.43%   |
| Brake Shoes & Pads                      | 14.95%       | 4.18%   | 15.49%  | 19.85%  | 19.44%  |
| Cabin Air Filters                       | 12.19%       | 13.99%  | 19.46%  | 13.34%  | 6.13%   |
| Catalytic Converters                    | 1.88%        | 1.00%   | 1.26%   | 1.89%   | 2.81%   |
| Coil Springs                            | 1.31%        | 1.65%   | 1.17%   | 1.04%   | 1.30%   |
| CV Boot Covers                          | 0.81%        | 0.89%   | 0.65%   | 0.58%   | 0.97%   |
| CV Half Shafts                          | 0.76%        | 1.03%   | 0.53%   | 0.56%   | 0.84%   |
| CV Joints                               | 1.44%        | 1.27%   | 1.03%   | 1.27%   | 1.87%   |
| Distributor Caps                        | 1.82%        | 1.65%   | 1.17%   | 1.00%   | 2.72%   |
| Drive Belt(s)                           | 1.58%        | 0.90%   | 1.04%   | 1.47%   | 2.43%   |
| Emission System Repair                  | 4.67%        | 2.73%   | 3.13%   | 4.21%   | 7.13%   |
| Engine Computer                         | 1.07%        | 1.25%   | 0.85%   | 0.85%   | 1.19%   |
| Engine Cooling Fan Motors               | 1.03%        | 1.10%   | 0.90%   | 0.75%   | 1.19%   |
| Engine Tune-Up                          | 19.91%       | 13.19%  | 16.80%  | 19.56%  | 26.48%  |
| Exhaust Pipes                           | 3.01%        | 2.59%   | 1.98%   | 2.35%   | 4.26%   |
| Exhaust System Jobs                     | 7.76%        | 6.33%   | 5.44%   | 6.30%   | 10.80%  |
| Fuel Filters                            | 3.86%        | 2.78%   | 3.59%   | 3.29%   | 5.05%   |
| Fuel Injectors                          | 0.85%        | 0.69%   | 0.69%   | 0.62%   | 1.15%   |
| Fuel Pumps                              | 1.72%        | 0.47%   | 0.76%   | 1.41%   | 3.28%   |
| Fuel System Cleaning                    | 1.46%        | 1.01%   | 1.45%   | 1.29%   | 1.85%   |
| Fuses                                   | 7.70%        | 3.19%   | 5.89%   | 7.27%   | 12.03%  |
| Head Gasket                             | 0.62%        | 0.19%   | 0.19%   | 0.42%   | 1.27%   |
| Headlamp Bulbs                          | 10.03%       | 3.02%   | 10.26%  | 15.20%  | 12.00%  |
| Heater Core                             | 0.86%        | 0.64%   | 0.53%   | 0.54%   | 1.37%   |
| Ignition Coils                          | 0.88%        | 0.22%   | 0.41%   | 1.10%   | 1.51%   |
| Ignition Control Unit                   | 0.51%        | 0.16%   | 0.29%   | 0.60%   | 0.84%   |
| Ignition Switch                         | 0.73%        | 0.18%   | 0.19%   | 0.92%   | 1.33%   |
| Ignition Wire Sets                      | 0.52%        | 0.16%   | 0.26%   | 0.43%   | 0.97%   |
| Mufflers                                | 3.66%        | 2.76%   | 2.44%   | 2.90%   | 5.35%   |
| Oil Changed                             | 142.87%      | 122.33% | 165.16% | 167.22% | 131.34% |
| Oil Filters                             | 94.46%       | 79.92%  | 109.75% | 110.00% | 87.45%  |
| Oil Pumps                               | 0.61%        | 0.75%   | 0.53%   | 0.45%   | 0.64%   |
| Oxygen Sensors                          | 2.75%        | 1.16%   | 1.60%   | 2.79%   | 4.47%   |
| PCV Valves                              | 1.13%        | 0.52%   | 0.80%   | 0.72%   | 1.94%   |
| Power Steering Fluid Flush              | 3.08%        | 1.84%   | 2.05%   | 3.03%   | 4.53%   |
| Power Steering Pumps                    | 1.40%        | 0.88%   | 0.74%   | 1.16%   | 2.26%   |
| Radiator Hoses: Lower                   | 1.24%        | 0.56%   | 0.56%   | 0.84%   | 2.30%   |
| Radiator Hoses: Upper                   | 1.42%        | 0.52%   | 0.75%   | 0.95%   | 2.66%   |
| Radiator Repaired                       | 1.21%        | 0.58%   | 0.75%   | 1.16%   | 1.92%   |
| Radiator Replaced                       | 2.20%        | 0.67%   | 0.88%   | 1.89%   | 4.15%   |
| Radiator/Cooling System Flush           | 3.04%        | 1.24%   | 2.24%   | 3.20%   | 4.64%   |
| Scheduled Maintenance Per Owners Manual | 37.45%       | 45.27%  | 48.63%  | 39.36%  | 24.69%  |
| Shock Absorbers: Air                    | 1.38%        | 1.69%   | 1.02%   | 1.07%   | 1.51%   |
| Shock Absorbers: Mac Pherson            | 0.72%        | 0.90%   | 0.70%   | 0.59%   | 0.68%   |
| Shock Absorbers: Regular                | 0.90%        | 0.50%   | 0.59%   | 0.99%   | 1.33%   |
| Spark Plug Wires                        | 5.27%        | 2.00%   | 2.79%   | 4.34%   | 9.42%   |
| Spark Plugs                             | 10.30%       | 4.04%   | 7.09%   | 10.69%  | 16.23%  |
| Starters                                | 1.72%        | 0.35%   | 0.52%   | 1.69%   | 3.35%   |
| State/City Emissions Check              | 10.54%       | 7.39%   | 12.45%  | 13.04%  | 10.32%  |
| Steering Rack                           | 0.31%        | 0.37%   | 0.17%   | 0.34%   | 0.35%   |
| Steering System Repaired                | 6.16%        | 3.02%   | 3.20%   | 6.36%   | 9.91%   |
| Strut Mounts                            | 0.95%        | 0.30%   | 0.56%   | 1.44%   | 1.37%   |
| Tail Pipes                              | 1.56%        | 0.91%   | 0.85%   | 1.30%   | 2.52%   |
| Thermostats                             | 4.35%        | 2.07%   | 2.29%   | 3.40%   | 7.58%   |
| Tie Rod Ends                            | 2.20%        | 0.42%   | 0.77%   | 2.85%   | 3.91%   |
| Timing Belt                             | 1.26%        | 0.30%   | 0.79%   | 1.19%   | 2.21%   |
| Timing Chain                            | 0.35%        | 0.21%   | 0.36%   | 0.38%   | 0.41%   |
| Tires (New)                             | 35.97%       | 25.26%  | 44.52%  | 41.74%  | 35.22%  |
| Tires Repaired                          | 9.13%        | 6.73%   | 9.40%   | 10.25%  | 9.99%   |
| Trans Fluid Changed                     | 5.80%        | 3.07%   | 5.37%   | 7.03%   | 7.26%   |
| Transmission Filters                    | 2.15%        | 1.77%   | 1.92%   | 2.05%   | 2.58%   |
| Transmission Overhauled                 | 0.70%        | 0.27%   | 0.41%   | 0.59%   | 1.20%   |
| Transmission Replaced                   | 1.04%        | 0.49%   | 0.84%   | 1.19%   | 1.45%   |
| Transmission Seals                      | 0.72%        | 0.40%   | 0.53%   | 0.71%   | 1.06%   |
| Valve Cover Gasket                      | 0.69%        | 0.22%   | 0.26%   | 0.50%   | 1.33%   |
| Water Pumps                             | 2.49%        | 0.79%   | 1.41%   | 2.33%   | 4.36%   |
| Wheel Bearings Replaced                 | 2.49%        | 0.97%   | 1.54%   | 3.24%   | 3.69%   |
| Wheel Bearings Serviced                 | 1.15%        | 0.77%   | 0.84%   | 1.25%   | 1.55%   |
| Wheels Aligned                          | 12.31%       | 9.74%   | 14.91%  | 14.83%  | 11.28%  |
| Wheels Balanced                         | 12.18%       | 9.29%   | 14.82%  | 14.91%  | 11.20%  |
| Window Lift Motors                      | 0.82%        | 0.39%   | 0.38%   | 0.86%   | 1.33%   |
| Windshield Replaced                     | 3.07%        | 2.59%   | 3.82%   | 3.71%   | 2.62%   |
| Wiper Blade(s) Replaced                 | 35.13%       | 21.70%  | 41.61%  | 41.91%  | 36.88%  |
| Wiper Refills/ Inserts Replaced         | 10.03%       | 6.87%   | 11.99%  | 11.52%  | 10.24%  |

Source: IMR Inc. (www.AutomotiveResearch.com) *Continuing Consumer Auto Maintenance Tracking Study*. Copyright 2018, IMR Inc. All Rights Reserved.

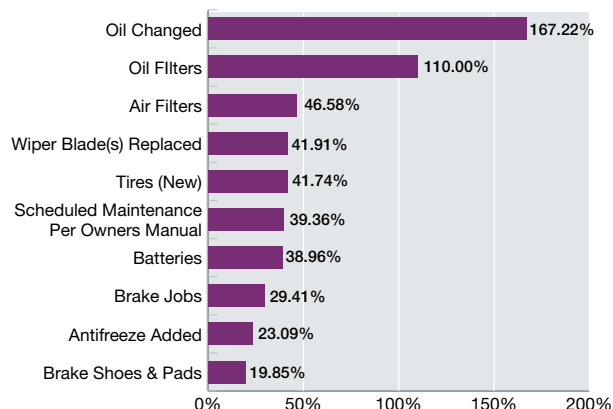
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# Top 10 Replacement Rate Categories by Vehicle Age

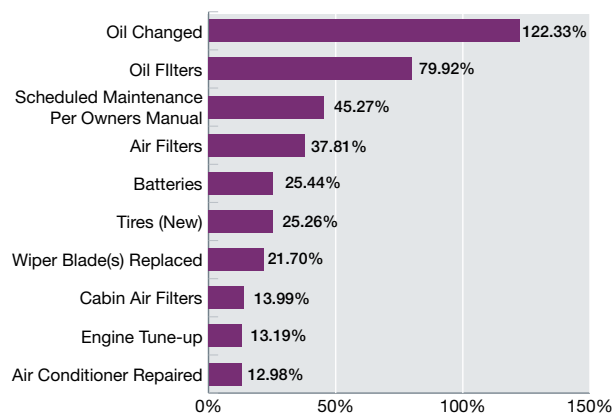
## Top 10: Total Sample



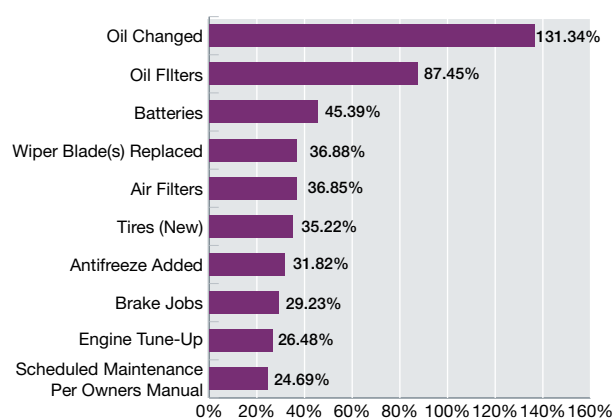
## Top 10: 8–11 Years



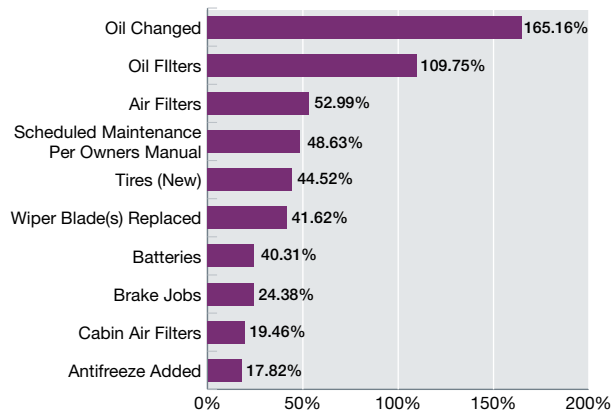
## Top 10: 0–3 Years



## Top 10: 12+ Years



## Top 10: 4–7 Years



Source: IMR Inc. ([www.AutomotiveResearch.com](http://www.AutomotiveResearch.com)) *Continuing Consumer Auto Maintenance Tracking Study*.

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# Delayed Maintenance

Consumer's decision to delay maintenance on their vehicles can involve many factors.

When consumers were asked if they had delayed any service or repair on their vehicle, 85.6 percent responded "No" when their vehicle was 0 to 3 years of age. However, for consumers with vehicles 12 years and older, the "No" response dropped to 70.3 percent clearly indicating service and maintenance declined with vehicle age.

When consumers were asked if they planned on having service or repair performed on their vehicles in the future, 88.7 percent responded "Yes" when their vehicle was 0 to 3 years of age. For those consumers with vehicles 12 years and older, the "Yes" response dropped to 79.3 percent suggesting the expectation for service and maintenance declined with vehicle age.

When consumers were asked about reasons for delayed maintenance, it was generally found that "cost of repair is too much" was given on average 38.5 percent of the time. This response ranged from 31.1 percent for owners with vehicles in the 0 to 3 year old range and increased to 40.4 percent for vehicles 12 years and older. "Couldn't find a convenient time" was the second highest response given on average at 20.8 percent of the time. The third highest percentage of respondents (18.7 percent) held the perception that "repairs aren't important to the overall drivability of the vehicle."

## Delayed Maintenance

| Question   | Answer  | Grand Total | Vehicle Age |             |              |           |
|--|---|-------------|-------------|-------------|--------------|-----------|
|  |   |             | 0 - 3 Years | 4 - 7 Years | 8 - 11 Years | 12+ Years |
| Have you delayed any service or repair on your vehicle?                              | No  | 76.9%       | 85.6%       | 81.1%       | 75.3%        | 70.3%     |
|  | Yes   | 23.1%       | 14.4%       | 18.9%       | 24.7%        | 29.7%     |
| Question   | Answer  | Grand Total | Vehicle Age |             |              |           |
|  |   |             | 0 - 3 Years | 4 - 7 Years | 8 - 11 Years | 12+ Years |
| Do you plan on having the service or repair performed on your vehicle in the future? | Yes   | 83.2%       | 88.7%       | 89.3%       | 83.6%        | 79.3%     |
|  | No  | 16.8%       | 11.3%       | 10.7%       | 16.4%        | 20.7%     |
| Question   | Answer  | Grand Total | Vehicle Age |             |              |           |
|  |   |             | 0 - 3 Years | 4 - 7 Years | 8 - 11 Years | 12+ Years |
| Reason for delayed maintenance   | Cost of repair is too much  | 38.5%       | 31.1%       | 36.3%       | 40.5%        | 40.4%     |
|  | Couldn't find a convenient time                                   | 20.8%       | 27.9%       | 24.3%       | 20.0%        | 18.1%     |
|  | Repair isn't important to the overall drivability of the vehicle  | 18.7%       | 12.9%       | 17.5%       | 20.5%        | 20.0%     |
|  | Other reasons   | 8.8%        | 8.4%        | 9.0%        | 8.5%         | 9.0%      |
|  | Repair takes too long/can't be without my vehicle                 | 3.6%        | 7.4%        | 4.1%        | 2.7%         | 2.8%      |
|  | Part not available  | 3.6%        | 6.9%        | 4.1%        | 2.6%         | 2.9%      |
|  | I don't plan on owning this vehicle much longer                   | 3.5%        | 2.4%        | 1.7%        | 2.7%         | 4.7%      |
|  | I wanted to get a second opinion on whether the repair was needed | 2.5%        | 3.1%        | 3.1%        | 2.6%         | 2.1%      |

Note: Category specific data is available upon request.

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# Auto Care Industry Segments

in this section

## **Medium and Heavy Duty Truck Industry**

Data on the medium and heavy duty truck segment of the auto care industry

## **Sales of Replacement Tires**

Data on sales of replacement tires for passenger cars, light trucks, medium duty trucks and heavy duty trucks

## **Tool and Equipment**

Data on the tool and equipment segment of the auto care industry

## **Paint, Body and Equipment**

Data on the paint, body and equipment (PBE) segment of the auto care industry



# Medium and Heavy Duty Auto Care Industry

The auto care industry's medium and heavy-duty segment includes parts, accessories, non-warranty service repair and maintenance for commercial, industrial and agricultural vehicles falling within weight classes four through eight. Usage of these vehicles and their demand for replacement parts is strongly connected to the prosperity of the U.S. economy. As demand for goods and services grows, so does movement of raw materials and finished goods; making good on the old metaphor that over the road commercial trucks are the lifeblood carrying essentials of society along America's arteries.

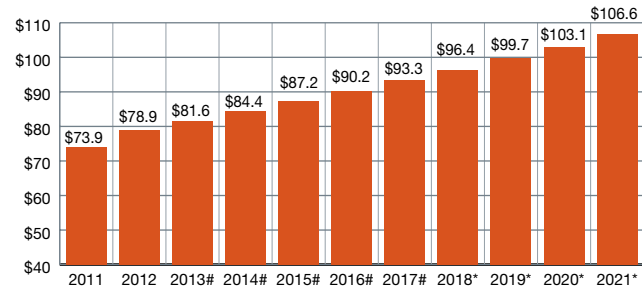
In 2009, we recalibrated our predictive index to more closely correlate to miles driven for these classes of vehicles. The resulting baseline revealed the close correlation between medium and heavy-duty auto care sales, miles traveled, tonnage hauled, tires replaced and more. The recession years of 2008 and 2009, as well as the beginnings of recovery signaled in 2010, reveal the correlations.

For 2011, the U.S. Department of Transportation (DOT) updated its data to be registrations-based and made fleet-appropriate adjustments to its vehicle classes. For continuity, DOT also published corresponding historical data updates. In this edition of the Factbook, appropriate historical updates have been applied where sales figures transitioned to registration-based data and/or where weight classes were recalibrated.

Our latest forecast for the period from 2018 to 2021 correlates with the continued economic recovery and anticipates a growth trend that is also predicted to benefit the light vehicle auto care industry, as discussed in earlier sections.

## Medium and Heavy Duty Industry Sales

(Billions of Retail Dollars)



Note:

# Estimate

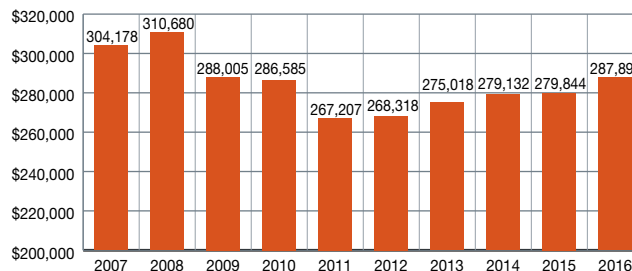
\* Forecast

Historical data have been revised.

Source:

Auto Care Association

## Single Unit<sup>(1)</sup> and Combination<sup>(2)</sup> Truck Miles Driven, 2007–2016 (Millions of Miles)



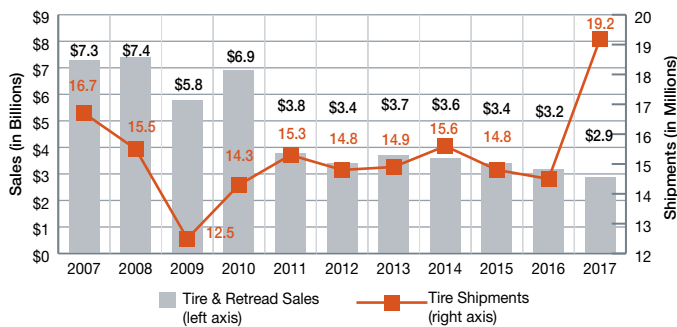
Definitions:

(1) Single-Unit - single frame trucks that have 2-Axles and at least 6 tires or a gross vehicle weight rating exceeding 10,000 lbs.

(2) Combination Trucks - Prior criteria used description: "Heavy Duty Trucks" to capture this class of vehicle.

Source: U.S. Department of Transportation / Highway Statistics

## Sales and Shipments of Truck Replacement Tire Retreads, 2007–2017



Note:

Historical data have been revised.

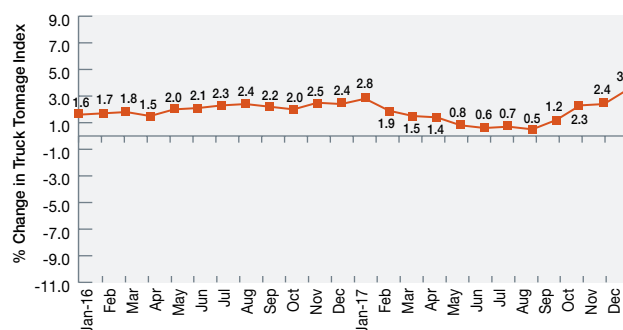
The large shipment on retread tires was due to record demand for such tires.

Sources:

Auto Care Association, Modern Tire Dealer's January 2018 Facts Issue

## Truck Tonnage Analysis

(% change in 12 – Month Moving Total compared to same month of previous year)



Sources:

Auto Care Industry Indicators Report, American Trucking Associations



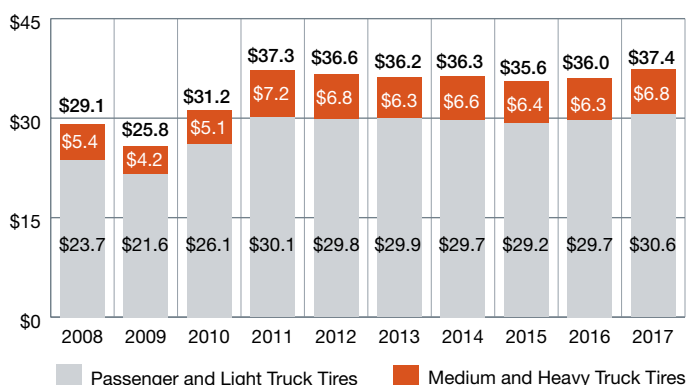
# Sales of Replacement Tires

Sales of replacement tires for light, medium and heavy-duty vehicles are important segment of the auto care industry. The 2008-2009 recession had a dramatic impact on the U.S. consumer tire retail market. However, the following two-year period recorded sales of \$31.2 billion in 2010 and \$37.3 billion in 2011, registering year-over-year increases of 20.9 percent and 19.6 percent respectively. Since then, sales have leveled at slightly over \$36 billion with a \$1.4 billion increase in 2017.

Bolstered by 3.21 trillion vehicle miles driven in 2017 and cheap imported tires from China, replacement passenger car, light truck and medium/heavy duty truck tires shipments from manufacturers were up slightly from 257.5 to 258.3 million units (a 0.3 percent increase from 2016 to 2017). It is interesting to note that 208.3 million units of replacement passenger tires and 19.2 million units of truck tires shipped were both record highs.

Despite increased competition, independent tire dealerships dominated the domestic passenger tire retail market with 61.5 percent of sales in 2017. Mass merchandisers/chains were second on the list with 11.5 percent market share having experienced a gradual decline in share of 3.5 percentage points since 2007. Auto dealerships, accounting for 9.0 percent of the market share in 2017, have seen their numbers improve from 6.0 percent since 2010. The remaining market share is comprised of warehouse clubs (9.0 percent share), tire company stores (6.5 percent share) and miscellaneous outlets (2.5 percent share).

## Replacement Tire Sales, 2008–2017 (Billions of Dollars)



Notes: Historical data have been revised. Labor is not generally included in the sales totals, but a small percentage of sales (less than 5 percent) is likely. Medium and heavy truck tire sales do not include sales of farm and off-road tires.

Sources: Auto Care Industry, *Modern Tire Dealer's 2018 Facts Issue*

## Replacement Tire Shipments from Manufacturers

(In Millions of Tire Units)

| Year       | Passenger | Light Truck | Medium/Heavy Truck | Total | YOY Percent Change |
|------------|-----------|-------------|--------------------|-------|--------------------|
| 2002       | 190.5     | 34.0        | 15.0               | 239.5 |                    |
| 2003       | 194.0     | 34.5        | 15.8               | 244.3 | 2.0%               |
| 2004       | 199.4     | 36.5        | 16.5               | 252.4 | 3.3%               |
| 2005       | 205.8     | 36.6        | 17.8               | 260.2 | 3.1%               |
| 2006       | 199.1     | 35.0        | 17.6               | 251.7 | -3.3%              |
| 2007       | 205.0     | 35.7        | 16.7               | 257.4 | 2.3%               |
| 2008       | 195.0     | 30.0        | 15.5               | 240.5 | -6.6%              |
| 2009       | 184.0     | 26.0        | 12.7               | 222.7 | -7.4%              |
| 2010       | 198.7     | 28.0        | 15.3               | 242.0 | 8.7%               |
| 2011       | 196.5     | 28.6        | 17.0               | 242.1 | 0.0%               |
| 2012       | 192.0     | 28.3        | 16.0               | 236.3 | -2.4%              |
| 2013       | 192.0     | 28.8        | 15.7               | 236.5 | 0.1%               |
| 2014       | 206.6     | 28.8        | 17.3               | 252.7 | 6.8%               |
| 2015       | 205.9     | 29.0        | 18.0               | 252.9 | 0.1%               |
| 2016       | 207.7     | 31.4        | 18.4               | 257.5 | 1.8%               |
| 2017       | 208.3     | 30.8        | 19.2               | 258.3 | 0.3%               |
| 10 yr CAGR | 0.2%      | -1.5%       | 1.4%               | 0.0%  |                    |

Notes: Historical data have been revised. Passenger tires are defined as P-metric/metric sized tires, including those used on some light trucks, SUVs and minivans. Light truck tires are defined as LT sized, smaller than 8.25" X 20". Medium truck tires are defined as 8.25" X 20" to 11" X 24.5"; includes wide-based tires. Heavy truck tires are defined as larger than 11" X 24.5" to 14" X 25".

Source: *Modern Tire Dealer's 2018 Facts Issue*

## Estimated Share of the Domestic Passenger Tire Retail Market (Based on Retail Sales)

| Type of Outlet               | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   |
|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Independent Tire Dealerships | 59.5%  | 60.0%  | 60.0%  | 60.0%  | 61.0%  | 60.5%  | 60.5%  | 60.5%  | 60.5%  | 61.0%  | 61.5%  |
| Mass Merchants/Chains        | 15.0%  | 14.5%  | 14.5%  | 14.5%  | 14.0%  | 14.0%  | 14.0%  | 13.0%  | 13.0%  | 12.0%  | 11.5%  |
| Warehouse Clubs              | 9.0%   | 9.0%   | 9.5%   | 9.5%   | 8.5%   | 8.5%   | 8.5%   | 9.0%   | 9.0%   | 9.0%   | 9.0%   |
| Tire Company Stores          | 7.5%   | 7.0%   | 7.0%   | 7.0%   | 7.5%   | 7.5%   | 7.5%   | 7.5%   | 7.5%   | 7.0%   | 6.5%   |
| Auto Dealerships             | 4.5%   | 5.5%   | 5.5%   | 6.0%   | 6.5%   | 7.0%   | 7.5%   | 8.0%   | 8.0%   | 8.5%   | 9.0%   |
| Service Stations             | 3.0%   | 2.5%   | 2.0%   | 1.5%   | nr     | nr     | nr     | nr     | nr     | nr     | nr     |
| Miscellaneous Outlets        | 1.5%   | 1.5%   | 1.5%   | 1.5%   | 2.5%   | 2.5%   | 2.0%   | 2.0%   | 2.0%   | 2.5%   | 2.5%   |
| Totals                       | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Note: nr= data not reported

Source: *Modern Tire Dealer's 2018 Facts Issue*

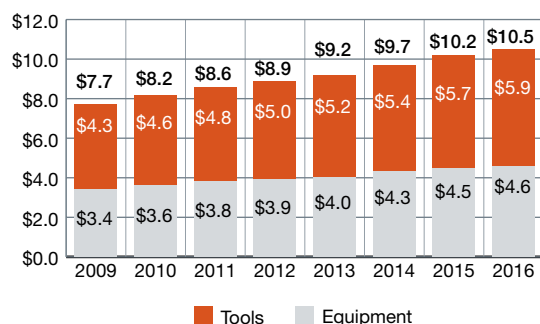
# Tool and Equipment

The tool and equipment segment of the auto care industry includes the tools and equipment used to repair and maintain motor vehicles. End users of this segment's products include do-it-yourself (DIY) consumers and professional repair shops, with most service technicians purchasing their tools from mobile tool distributors and most repair shops purchasing their equipment from either mobile tool distributors or auto parts jobber stores.

According to Lang Marketing Resources, Inc., in 2016 DIY consumers and professional repair shops purchased \$5.9 billion in tools and \$4.6 billion-worth of equipment. Furthermore, in a five-year period from 2011 to 2016, tool and equipment sales both experienced annual growth rates of 4.1 percent.

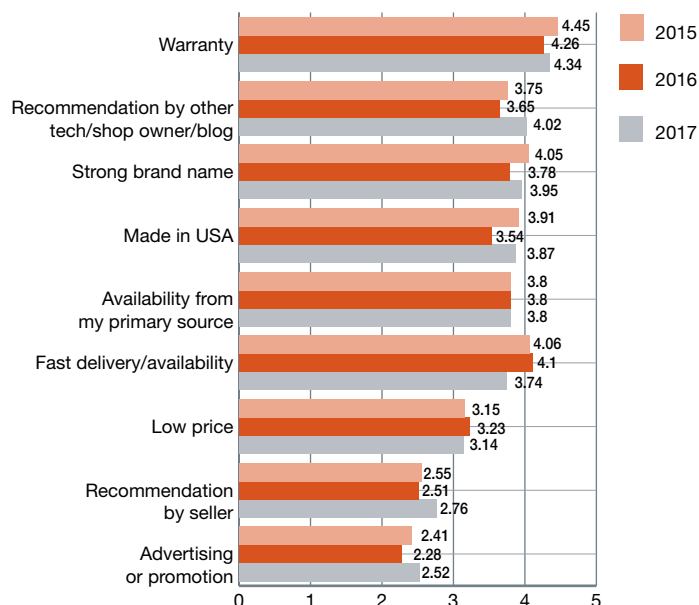
The *2018 Digital Tool and Equipment Study* is a survey-based research report directed by the Auto Care Association's Tool and Equipment Committee. This publication concluded that repair shops' tool purchasing decisions remain largely driven by the desire for warranty first, then by recommendations of other technicians and strong brand name following close behind. In 2017 (and for the fifth year in a row) the mobile tool vendor was the supplier most frequently used for tool purchases. The full line parts jobber and internet sellers, along with manufacturers were the next most frequently used suppliers.

## Tool and Equipment Auto Care Sales (Billions of Dollars)



Source: Factbook and Lang Annual 2018, page 39 and previous years. Printed with approval.

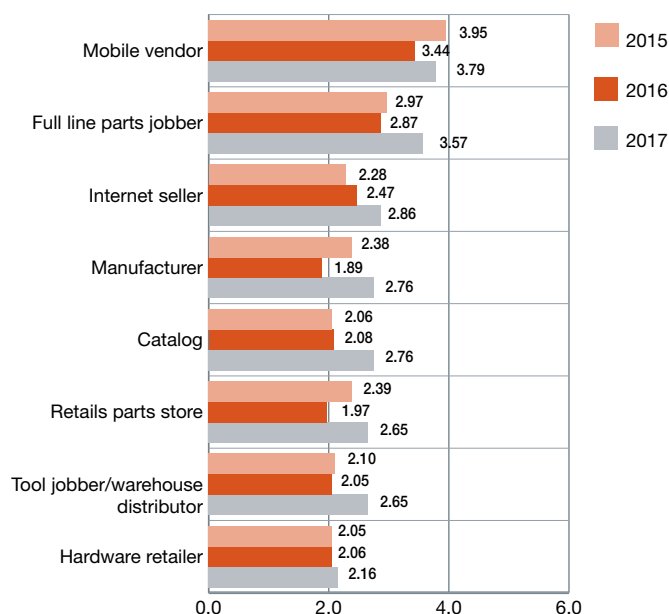
## Factors Influencing Tools Purchasing Decisions, 2015, 2016 and 2017 (All Respondents)



Source: 2018 Purchasing Trends Study - Tools & Equipment

Note: The mean ratings were based on a 5-point scale, where 1= not important and 5 = very important

## Traditional Suppliers for Past Tool Purchases, 2015, 2016 and 2017 (Average Ratings)



Source: 2018 Purchasing Trends Study - Tools & Equipment

# Paint, Body and Equipment

The paint, body and equipment (PBE) segment of the industry includes the products and services used to repair and refinish motor vehicles' bodies and glass. The end users of this segment's products are the repair shops that perform collision repairs. In 2017, service and repair sales in the PBE segment totaled an estimated \$46.6 billion, up 1.6 percent from \$45.8 billion in 2016 with a 5-year CAGR of 2.8 percent expected for the 2016 to 2021 timeframe.

From 2007 through 2017, the number of collision repair facilities in the U.S. gradually declined at a 10-year compounded annual growth rate (CAGR) of -0.7 percent. The current figures now stand at 41,219 repair shops in 2017, representing a slight 0.8 percent increase over 2016.

A variety of factors influence consumers' decisions when selecting an outlet for the collision repair work done on their vehicles. Good previous experience (32.6 percent) and a friend or family member's recommendations (13.1 percent) are the top two reasons for selecting a preferred outlet. Convenient location (12.4 percent), trust in the store (7.5 percent) and low prices (5.5 percent) are the next most important reasons.

Following increased road congestion between 2000 and 2007, congestion declined due to higher gasoline prices and the beginning of the recession in 2008. The years following the recession (2013-2017) have seen a return to increasing road congestion. Increases in this index means that more vehicles are on the road at any given time. Increased registrations per mile of road indicate greater vehicle density, which increases the likelihood for collisions because less room is available for safe maneuvering on highways and streets. In 2000, the ratio of vehicle miles traveled to overall length of U.S. roads was 695,416 miles driven for each mile of road. By the end of 2017, the ratio had increased to 783,955 miles driven for each mile of road.

## Collision Repair Receipts (Millions of Dollars)

| NAICS Codes | Type of Business   | 2016#           | 2017*           | 2018*           | 2019*           | 2020*           | 2021*           | Compounded Annual Growth (2016-2021) |
|-------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------------------------|
| 811121      | Paint and body repair shops  | \$31,336        | \$32,139        | \$33,225        | \$34,273        | \$35,347        | \$36,282        | 3.0%                                 |
|             | Dealership-operated repair shops <sup>1</sup>                                    | \$6,977         | \$6,730         | \$6,936         | \$7,149         | \$7,368         | \$7,598         | 1.7%                                 |
| 811122      | Automotive glass repair shops  | \$3,568         | \$3,677         | \$3,811         | \$3,946         | \$4,084         | \$4,208         | 3.4%                                 |
|             | Other repair shops doing paint, body and glass repair & replacement <sup>2</sup> | \$3,942         | \$4,004         | \$4,138         | \$4,269         | \$4,416         | \$4,524         | 2.8%                                 |
|             | <b>Total paint, body and glass repair receipts</b>                               | <b>\$45,824</b> | <b>\$46,550</b> | <b>\$48,110</b> | <b>\$49,637</b> | <b>\$51,215</b> | <b>\$52,612</b> | <b>2.8%</b>                          |
|             | <b>YOY Percent Change</b>  |                 | <b>1.6%</b>     | <b>3.4%</b>     | <b>3.2%</b>     | <b>3.2%</b>     | <b>2.7%</b>     |                                      |

Notes: \* Forecast # Estimate

Historical Data have been revised.

Figures represent only the collision repair and glass repair/replacement performed by these shops and do not represent their total sales.

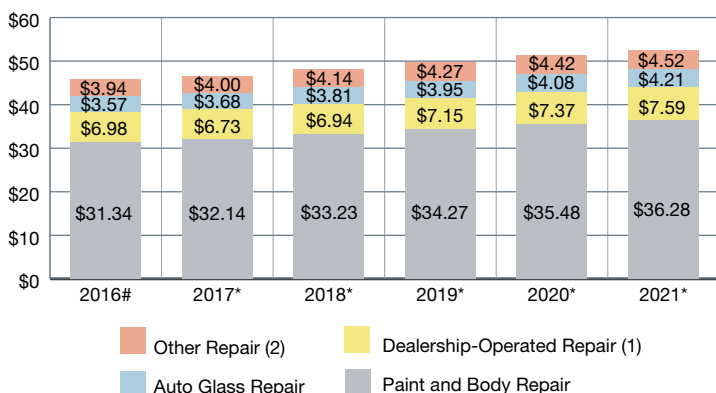
These figures include glass repair and replacement but DO NOT include DIY sales at auto parts stores and mass merchants.

<sup>1</sup> NADA Industry Analysis Division (NADA DATA 2017, page30)

<sup>2</sup> The "Other" category is an estimated to be 8.6% of the total.

Sources: Auto Care Association's Channel Forecast Model, NADA Industry Analysis Division

## Segmented Collision Repair Receipts, 2016-2021 (Billions of Dollars)



Notes: \* Forecast #Estimate

Historical data have been revised.

Figures represent only the collision repair and glass repair/replacement performed by these shops and do not represent their total sales.

These figures include glass repair and replacement but DO NOT include DIY sales at auto parts stores and mass merchants.

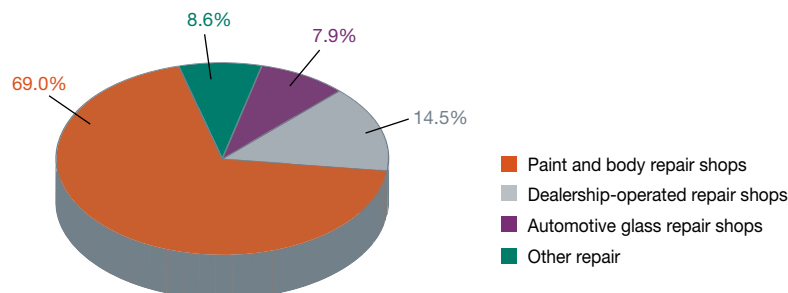
<sup>1</sup> NADA updates for 2018 were not available at time of printing.

<sup>2</sup> The "Other" category is an estimate based upon the relationship between the three main categories and the total.

Sources: Auto Care Association's Channel Forecast Model, NADA Industry Analysis Division

# Paint, Body and Equipment

## Collision Repair Receipts, 2017 (\$46,550 Million)



Sources: Auto Care Association's *Channel Forecast Model*, NADA Industry Analysis Division

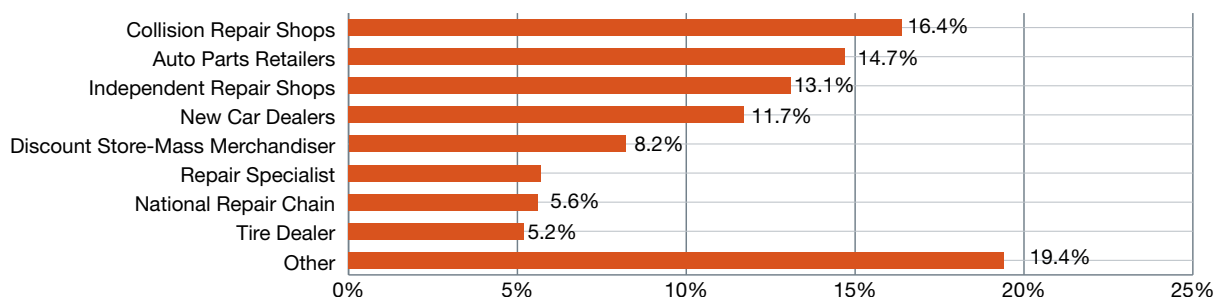
## U.S. Shops Specializing in Collision Repair, 2003–2017

| Year       | Collision Repair Shops <sup>1</sup> | Dealerships with Body Shops <sup>2</sup> | Total Collision Repair Shops | % Change Total Collision Repair Shops |
|------------|-------------------------------------|--|------------------------------|---------------------------------------|
| 2003       | 37,229                              | 8,660                                    | 45,889                       | na                                    |
| 2004       | 37,048                              | 8,440                                    | 45,488                       | -0.9%                                 |
| 2005       | 36,818                              | 8,295                                    | 45,113                       | -0.8%                                 |
| 2006       | 36,649                              | 8,692                                    | 45,341                       | 0.5%                                  |
| 2007       | 36,467                              | 7,768                                    | 44,235                       | -2.4%                                 |
| 2008       | 36,041                              | 7,477                                    | 43,518                       | -1.6%                                 |
| 2009       | 35,193                              | 7,203                                    | 42,396                       | -2.6%                                 |
| 2010       | 34,764                              | 6,092                                    | 40,856                       | -3.6%                                 |
| 2011       | 34,358                              | 6,372                                    | 40,730                       | -0.3%                                 |
| 2012       | 34,437                              | 6,456                                    | 40,893                       | 0.4%                                  |
| 2013       | 34,344                              | 6,172                                    | 40,516                       | -0.9%                                 |
| 2014       | 34,381                              | 6,359                                    | 40,740                       | 0.6%                                  |
| 2015       | 34,510                              | 6,386                                    | 40,896                       | 0.4%                                  |
| 2016       | 34,654                              | 6,248                                    | 40,902                       | 0.0%                                  |
| 2017       | 34,629                              | 6,590                                    | 41,219                       | 0.8%                                  |
| 10-Yr CAGR | -0.5%                               | -1.6%                                    | -0.7%                        |                                       |

Notes: na = not available  
Historical data have been revised.

Sources: <sup>1</sup> Bureau of Labor Statistics  
<sup>2</sup> NADA Industry Analysis Division

## Total Channel Share of Collision Repair Work, 2017

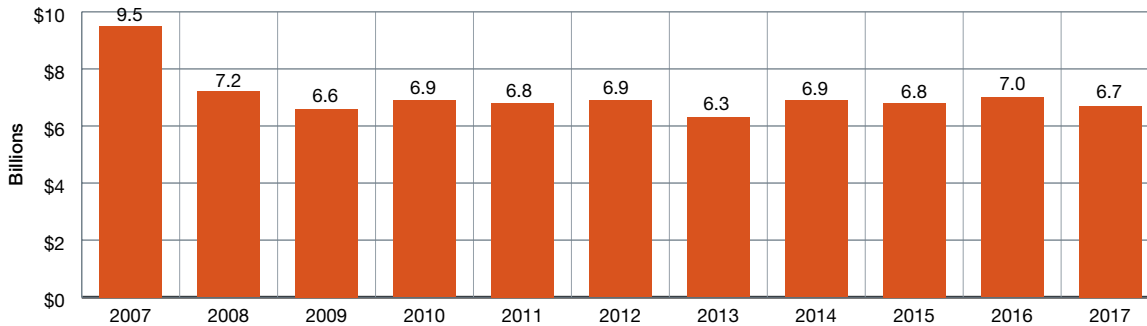


Source: IMR Inc. ([www.AutomotiveResearch.com](http://www.AutomotiveResearch.com)) *Continuing Consumer Auto Maintenance Tracking Study*.  
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# Paint, Body and Equipment

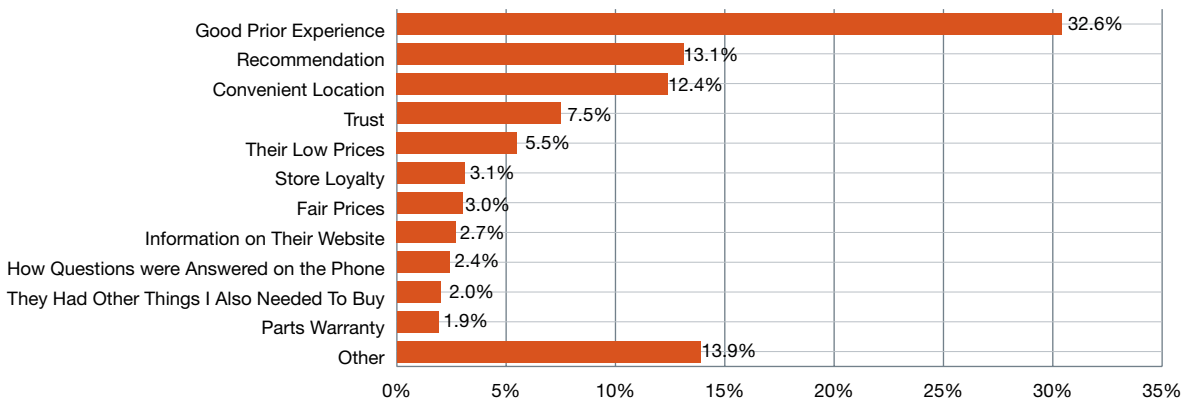
## Dealership-Operated Body Shop Service and Parts Sales, 2007–2017

(Billions of Dollars)



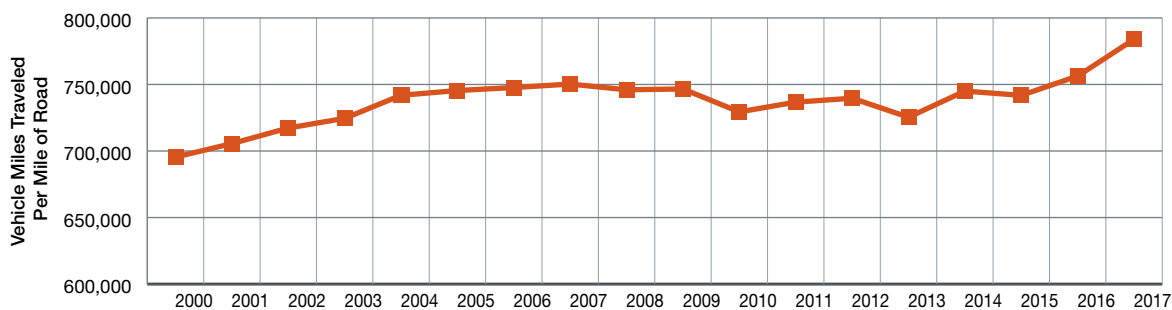
Source: NADA Industry Analysis Division  
Historical data have been revised

## Reasons for Choosing a Preferred Outlet for Collision Repairs, 2017



Source: IMR Inc. ([www.AutomotiveResearch.com](http://www.AutomotiveResearch.com)) *Continuing Consumer Auto Maintenance Tracking Study*.  
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## Roadway Travel Congestion Index, 2000–2017



Sources: U.S. Department of Transportation, CIA World Factbook. 2016–2017

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## Collision Repair Trends Report: Industry Statistics & Analysis 2018

This study synthesizes the latest available industry data from original Auto Care Association research, government sources and independent research suppliers. The report provides comprehensive insight into the U.S. collision repair sector of the auto care industry including the paint, body and equipment (PBE) industry. The last chapter of the report is devoted to the Canadian collision industry.





# Vehicle Registrations and Usage

in this section

## **U.S. New Motor Vehicle Registrations**

Registrations of new and used motor vehicles

## **Top 10 Light Vehicle Registrations**

Sales data for the top 10 passenger cars and light trucks

## **U.S. Motor Vehicle Population**

Data on the characteristics of the motor vehicle population, including licensed drivers, registrations, average age and scrappage rates

## **U.S. VIO Perspective**

American consumers continue to demonstrate a strong preference for import name plates

## **Hybrid Vehicles**

Information on hybrid vehicle registrations by state and model

## **Vehicle Operating Costs**

Consists of data on light vehicle operating costs, including fuel, maintenance and tire expenses

## **Miles Traveled And Gasoline Affordability**

Data on fuel consumption, gasoline prices, miles traveled, cost of oil and gas mileage tips

## **Gasoline Affordability and Fuel Consumption**

Consists of average gasoline prices, fuel efficiency and consumption by vehicle type and average annual miles traveled

## **Crude Oil and Diesel Fuel Costs**

Includes U.S. crude oil imported acquisition cost and producer price index for diesel fuel

# U.S. New Motor Vehicle Registrations

The auto industry's record vehicle sales appears to be ending, as Americans last year purchased fewer vehicles than in the previous year. U.S. new vehicle registrations decreased 1.5 percent to 17.6 million in 2017. This is the first year-over-year decrease since 2009 when the number of registered vehicles declined by 21.9 percent.

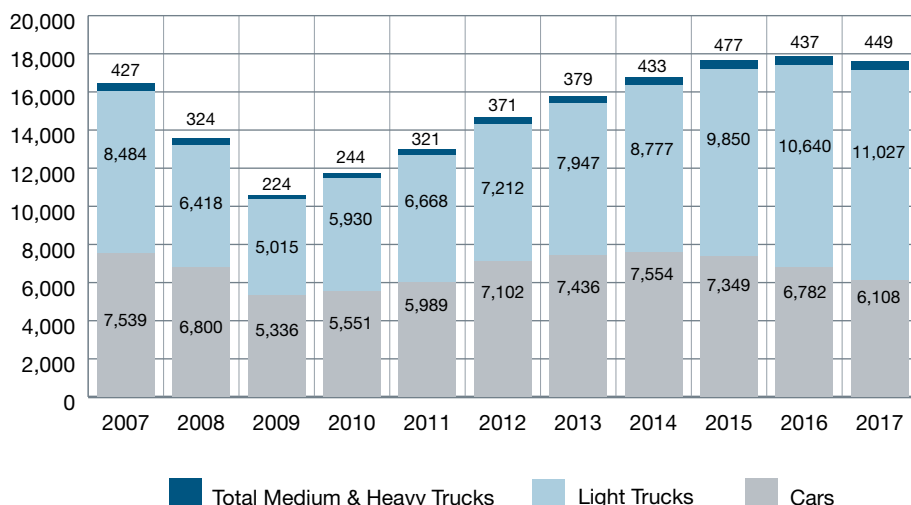
Demand for light trucks was higher than passenger cars last year. Cheaper gasoline led to an increase in the sale of light trucks, compared to passenger cars. Light trucks grew 3.6 percent in 2017, achieving a record number in new registrations and representing 64.4 percent of total light vehicle sales. Meanwhile, new passenger car registrations decreased 9.9 percent while import vehicles continue to dominate this category with 73.8 percent of total sales.

Combined registrations of new medium (GVW 4-6) and heavy-duty (GVW 7-8) trucks increased 2.7 percent to 449,000 units in 2017. Driving this increase was the year-over-year increase in medium duty trucks with 3.9 percent while heavy-duty truck registrations increased only 1.9 percent.

## U.S. Motor Vehicle Registrations, 2007–2017 (In Thousands)

| Report Year | Cars     |        |       |          | Light Trucks (GVW 1-3) |        |        |          | Light Truck % of Total Light Vehicles | Total Light Vehicles | Medium & Heavy Duty Trucks   |                             |                       | Total Vehicles |                             |
|-------------|----------|--------|-------|----------|------------------------|--------|--------|----------|---------------------------------------|----------------------|------------------------------|-----------------------------|-----------------------|----------------|-----------------------------|
|             | Domestic | Import | Total | % Import | Domestic               | Import | Total  | % Import |                                       |                      | Medium Duty Trucks GVW (4-6) | Heavy Duty Trucks GVW (7-8) | Medium & Heavy Trucks | All Vehicles   | % Change from Previous Year |
| 2007        | 2,751    | 4,788  | 7,539 | 63.5%    | 5,412                  | 3,072  | 8,484  | 36.2%    | 53.0%                                 | 16,023               | 181                          | 246                         | 427                   | 16,451         | na                          |
| 2008        | 2,327    | 4,473  | 6,800 | 65.8%    | 3,955                  | 2,462  | 6,418  | 38.4%    | 48.6%                                 | 13,218               | 132                          | 192                         | 324                   | 13,541         | -17.7%                      |
| 2009        | 1,674    | 3,661  | 5,336 | 68.6%    | 2,877                  | 2,138  | 5,015  | 42.6%    | 48.5%                                 | 10,351               | 78                           | 146                         | 224                   | 10,575         | -21.9%                      |
| 2010        | 1,800    | 3,751  | 5,551 | 68.1%    | 3,371                  | 2,559  | 5,930  | 42.3%    | 50.8%                                 | 11,480               | 82                           | 162                         | 244                   | 11,724         | 10.9%                       |
| 2011        | 1,991    | 3,998  | 5,989 | 66.8%    | 3,899                  | 2,768  | 6,668  | 41.5%    | 52.7%                                 | 12,657               | 103                          | 218                         | 321                   | 12,978         | 10.7%                       |
| 2012        | 2,230    | 4,872  | 7,102 | 68.6%    | 4,105                  | 3,106  | 7,212  | 43.1%    | 50.4%                                 | 14,314               | 120                          | 251                         | 371                   | 14,685         | 13.2%                       |
| 2013        | 2,411    | 5,025  | 7,436 | 67.6%    | 4,503                  | 3,443  | 7,947  | 43.3%    | 51.7%                                 | 15,383               | 135                          | 244                         | 379                   | 15,762         | 7.3%                        |
| 2014        | 2,348    | 5,206  | 7,554 | 68.9%    | 4,983                  | 3,793  | 8,777  | 43.2%    | 53.7%                                 | 16,331               | 146                          | 287                         | 433                   | 16,764         | 6.4%                        |
| 2015        | 2,207    | 5,142  | 7,349 | 70.0%    | 5,532                  | 4,318  | 9,850  | 43.8%    | 57.3%                                 | 17,199               | 155                          | 322                         | 477                   | 17,676         | 5.4%                        |
| 2016        | 1,917    | 4,865  | 6,782 | 71.7%    | 5,866                  | 4,773  | 10,640 | 44.9%    | 61.1%                                 | 17,422               | 174                          | 263                         | 437                   | 17,859         | 1.0%                        |
| 2017        | 1,603    | 4,505  | 6,108 | 73.8%    | 5,866                  | 5,070  | 11,027 | 46.0%    | 64.4%                                 | 17,135               | 181                          | 268                         | 449                   | 17,584         | -1.5%                       |
| YOY % Chg.  | -16.4%   | -7.4%  | -9.9% |          | 0.0%                   | 6.2%   | 3.6%   | 2.5%     |                                       | -1.6%                | 3.9%                         | 1.9%                        | 2.7%                  | -1.5%          |                             |

## U.S. Motor Vehicle Registrations, 2007–2017 (In Thousands)



Notes: Historical data have been revised. Domestic vehicles refer to those vehicles manufactured by U.S. companies (GM, Ford, Chrysler, Tesla) and their sub-brands.

Source: Light vehicle registration counts from IHSMARKIT's NVPP® database as of December 31, 2017.

Medium and heavy duty truck registration from IHSMARKIT's Trucking Industry Profile® system as of December 31, 2017.

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# Top 10 Light Vehicle Registrations

The top 10 passenger cars for 2017 represented 43.3 percent of total new registrations. Foreign vehicles produced by Toyota, Honda and Nissan held the top six positions. Domestic vehicles produced by Ford and Chevrolet occupied the seventh and eighth positions respectively.

The top 10 light truck registrations made up 37.9 percent of total new registrations with three of the top five being domestic models from Ford, Chevy and Dodge.

As mentioned on the previous page, the overall number of new light vehicle registrations totaled 17.1 million in 2017. The market for used vehicles is 2.3 times the size of the new vehicle market on a unit basis, reaching 39.3 million units in 2017. Used vehicle registrations increased by 1.7 percent in 2017, resulting in an overall increase in total registrations by 0.7 percent.

NOTE: Top 10 data have been updated to be registrations-based, providing a more verifiable record of vehicles in the fleet, from published state and federal sources. For consistency, corresponding historical data have likewise been updated to registrations-criteria.

## Top 10 Light Vehicle Registrations

(Based on 2017 C-Y NEW Registrations)

| Top 10 Passenger Car Registrations                 | 2016             | 2017             | % Change 2016/2017 |
|--|------------------|------------------|--------------------|
| Toyota Camry                                       | 388,263          | 386,198          | -0.5%              |
| Honda Civic  | 366,529          | 376,385          | 2.7%               |
| Honda Accord                                       | 343,971          | 324,544          | -5.6%              |
| Toyota Corolla                                     | 362,665          | 314,031          | -13.4%             |
| Nissan Altima                                      | 309,142          | 256,443          | -17.0%             |
| Nissan Sentra                                      | 218,104          | 211,321          | -3.1%              |
| Ford Fusion  | 265,032          | 208,878          | -21.2%             |
| Chevrolet Malibu                                   | 226,506          | 191,895          | -15.3%             |
| Hyundai Elantra Sedan                              | 180,862          | 191,001          | 5.6%               |
| Chevrolet Cruze                                    | 132,891          | 186,670          | 40.5%              |
| <b>Top 10 Passenger Car Registrations Total</b>    | <b>2,793,965</b> | <b>2,647,366</b> | <b>-5.2%</b>       |
| <b>Total Passenger Car Registrations</b>           | <b>6,783,586</b> | <b>6,107,789</b> | <b>-10.0%</b>      |
| <b>Top 10 as a Percent of Total Passenger Cars</b> | <b>41.2%</b>     | <b>43.3%</b>     |                    |

| Top 10 Light Truck Registrations                | 2016              | 2017              | % Change 2016/2017 |
|---|-------------------|-------------------|--------------------|
| Ford F Series                                   | 774,963           | 845,523           | 9.1%               |
| Chevrolet Silverado                             | 581,050           | 587,194           | 1.1%               |
| Ram   | 472,646           | 486,268           | 2.9%               |
| Toyota RAV4                                     | 351,034           | 410,909           | 17.1%              |
| Honda CR-V                                      | 355,010           | 377,373           | 6.3%               |
| Nissan Rogue                                    | 320,527           | 362,348           | 13.0%              |
| Ford Escape                                     | 306,690           | 307,149           | 0.1%               |
| Chevrolet Equinox                               | 239,186           | 291,355           | 21.8%              |
| Ford Explorer                                   | 249,098           | 270,071           | 8.4%               |
| Jeep Grand Cherokee                             | 209,290           | 240,574           | 14.9%              |
| <b>Top 10 Light Truck Registrations Total</b>   | <b>3,859,494</b>  | <b>4,178,764</b>  | <b>8.3%</b>        |
| <b>Total Light Truck Registrations</b>          | <b>10,648,004</b> | <b>11,027,206</b> | <b>3.6%</b>        |
| <b>Top 10 as a Percent of Total Light Truck</b> | <b>36.2%</b>      | <b>37.9%</b>      |                    |
| <b>Total U.S. Light Vehicle Registrations</b>   | <b>17,431,590</b> | <b>17,134,995</b> | <b>-1.7%</b>       |

Source: © 2018 IHS Markit

## U.S Light Vehicle Market, 2001–2017 (Thousands of Vehicles)

| Year              | New Registrations | Used Registrations | Total Registrations | % Change | Retail Lease | Commercial Lease | Total Lease  | Lease % new |
|-------------------|-------------------|--------------------|---------------------|----------|--------------|------------------|--------------|-------------|
| 2001              | 17,291            | -                  | -                   |          | 2,568        | 94               | 2,662        | 15.4%       |
| 2002              | 16,715            | 41,201             | 57,916              |          | 2,254        | 129              | 2,383        | 14.3%       |
| 2003              | 16,619            | 41,076             | 57,695              | -0.4%    | 1,782        | 117              | 1,899        | 11.4%       |
| 2004              | 16,867            | 41,672             | 58,539              | 1.5%     | 1,904        | 154              | 2,058        | 12.2%       |
| 2005              | 16,761            | 42,259             | 59,020              | 0.8%     | 2,157        | 183              | 2,340        | 14.0%       |
| 2006              | 16,574            | 39,372             | 55,947              | -5.2%    | 2,470        | 192              | 2,662        | 16.1%       |
| 2007              | 16,023            | 38,280             | 54,303              | -2.9%    | 2,472        | 196              | 2,668        | 16.7%       |
| 2008              | 13,218            | 36,147             | 49,364              | -9.1%    | 1,968        | 173              | 2,141        | 16.2%       |
| 2009              | 10,351            | 35,622             | 45,973              | -6.9%    | 1,120        | 111              | 1,231        | 11.9%       |
| 2010              | 11,480            | 36,911             | 48,391              | 5.3%     | 1,736        | 151              | 1,887        | 16.4%       |
| 2011              | 12,659            | 36,921             | 49,579              | 4.2%     | 2,014        | 169              | 2,182        | 17.2%       |
| 2012              | 14,315            | 37,583             | 51,898              | 4.7%     | 2,348        | 187              | 2,535        | 17.7%       |
| 2013              | 15,384            | 35,815             | 51,199              | -1.3%    | 2,989        | 185              | 3,174        | 20.6%       |
| 2014              | 16,331            | 36,664             | 52,995              | 3.5%     | 3,362        | 194              | 3,556        | 21.8%       |
| 2015              | 17,200            | 38,023             | 55,224              | 4.2%     | 3,877        | 200              | 4,077        | 23.7%       |
| 2016              | 17,432            | 38,602             | 56,034              | 1.5%     | 4,210        | 204              | 4,413        | 25.3%       |
| 2017              | 17,135            | 39,265             | 56,400              | 0.7%     | 4,074        | 177              | 4,251        | 24.8%       |
| <b>YOY % Chg.</b> | <b>-1.7%</b>      | <b>1.7%</b>        | <b>0.7%</b>         |          | <b>-3.2%</b> | <b>-13.2%</b>    | <b>-3.7%</b> |             |

Source: © 2018 IHS Markit

# U.S. Total Motor Vehicle Population

The number of registered motor vehicles in the U.S. grew to 280.6 million in 2018. The number increased by 0.7 percent from the previous year's 278.6 million. Of the 280.6 million total vehicle fleet, light vehicles accounted for 272.3 million, while medium and heavy-duty truck registrations totaled 8.2 million (page 62).

The overall scrappage rate was 5.7 percent of the overall light vehicle population in 2018 and the highest since 2013 (page 63).

The trend in aging vehicles since 2002 has continued unabated right on through the 2008-2009 recession. For the seventh consecutive year, the average age of all vehicles has reached or exceeded 11 years. The longevity of all light vehicles reached 11.7 years in 2018.

Evidence of the aging light vehicle fleet can be seen in the age mix of vehicles. This chart shows that vehicles in the 11+ year old category now comprise 48.7 percent of total light vehicles (up from 36.3 percent

in 2008) and is growing at a compounded annual growth rate of 3.6 percent. It is this analysis that helps to explain how the industry can sustain growth in concert with fluctuating gasoline prices and gradually increasing miles driven.

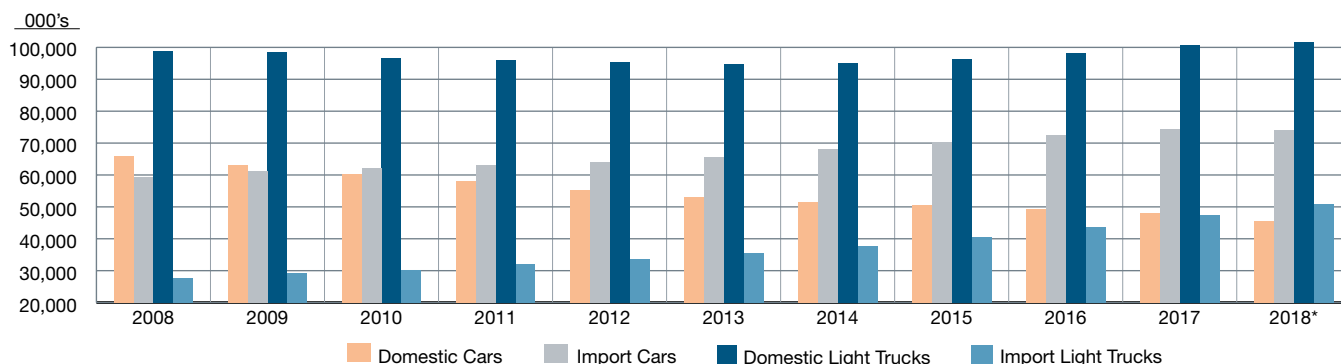
## U.S. Motor Vehicle Population (VIO), 2008–2018 (In Thousands)

| Report Year | Cars     |        |         |          | Light Trucks (GVW 1-3) |        |         |          |                                       | Total Light Vehicles | Medium & Heavy Duty Trucks   |                             |                       | Total Vehicles |                             |
|-------------|----------|--------|---------|----------|------------------------|--------|---------|----------|---------------------------------------|----------------------|------------------------------|-----------------------------|-----------------------|----------------|-----------------------------|
|             | Domestic | Import | Total   | % Import | Domestic               | Import | Total   | % Import | Light Truck % of Total Light Vehicles | Total Light Vehicles | Medium Duty Trucks GVW (4-6) | Heavy Duty Trucks GVW (7-8) | Medium & Heavy Trucks | All Vehicles   | % Change from Previous Year |
| 2008        | 65,896   | 59,417 | 125,313 | 47.4%    | 98,905                 | 27,676 | 126,581 | 21.9%    | 50.3%                                 | 251,894              | 2,749                        | 4,647                       | 7,395                 | 259,289        | na                          |
| 2009        | 63,220   | 61,236 | 124,456 | 49.2%    | 98,453                 | 29,249 | 127,702 | 22.9%    | 50.6%                                 | 252,158              | 2,567                        | 4,346                       | 6,914                 | 259,072        | -0.1%                       |
| 2010        | 60,316   | 62,135 | 122,451 | 50.7%    | 96,678                 | 30,302 | 126,981 | 23.9%    | 50.9%                                 | 249,432              | 2,853                        | 4,819                       | 7,673                 | 257,105        | -0.8%                       |
| 2011        | 58,111   | 63,261 | 121,372 | 52.1%    | 96,164                 | 31,938 | 128,102 | 24.9%    | 51.3%                                 | 249,474              | 2,493                        | 4,185                       | 6,678                 | 256,152        | -0.4%                       |
| 2012        | 55,416   | 64,117 | 119,533 | 53.6%    | 95,547                 | 33,642 | 129,188 | 26.0%    | 51.9%                                 | 248,721              | 2,867                        | 4,817                       | 7,684                 | 256,405        | 0.1%                        |
| 2013        | 52,949   | 65,677 | 118,625 | 55.4%    | 94,726                 | 35,498 | 130,224 | 27.3%    | 52.3%                                 | 248,849              | 2,845                        | 4,993                       | 7,839                 | 256,688        | 0.1%                        |
| 2014        | 51,581   | 68,049 | 119,631 | 56.9%    | 95,170                 | 37,800 | 132,970 | 28.4%    | 52.6%                                 | 252,601              | 2,629                        | 4,490                       | 7,119                 | 259,720        | 1.2%                        |
| 2015        | 50,501   | 70,440 | 120,941 | 58.2%    | 96,440                 | 40,530 | 136,969 | 29.6%    | 53.1%                                 | 257,910              | 2,704                        | 4,652                       | 7,356                 | 265,266        | 2.1%                        |
| 2016        | 49,368   | 72,616 | 121,984 | 59.5%    | 98,351                 | 43,740 | 142,091 | 30.8%    | 53.8%                                 | 264,075              | 2,903                        | 5,071                       | 7,973                 | 272,048        | 2.6%                        |
| 2017        | 48,021   | 74,425 | 122,446 | 60.8%    | 100,578                | 47,419 | 147,997 | 32.0%    | 54.7%                                 | 270,443              | 2,973                        | 5,191                       | 8,164                 | 278,608        | 2.4%                        |
| 2018*       | 45,536   | 74,113 | 119,650 | 61.9%    | 101,783                | 50,737 | 152,520 | 33.3%    | 56.0%                                 | 272,342              | 3,023                        | 5,220                       | 8,242                 | 280,584        | 0.7%                        |
| YOY % Chg.  | -5.2%    | -0.4%  | -2.3%   | 1.9%     | 1.2%                   | 7.0%   | 3.1%    | 3.8%     | 2.3%                                  | 0.7%                 | 1.7%                         | 0.6%                        | 1.0%                  | 0.7%           |                             |

Note: \*2018 VIO was affected by one-time enhancements to how branded (scrapped due to collision, fire, flood, etc.) and export vehicles are handled which caused the appearance of muted year over year growth.

Source: © 2018 IHS Markit

## U.S. Light Vehicle Population, 2008–2018 (In Thousands)



Source: © 2018 IHS Markit

# U.S. Motor Vehicle Population

## Vehicle Scrappage Rates

(2003–2018)

| Year  | Passenger Car | Light Trucks | All Light Vehicles |
|-------|---------------|--------------|--------------------|
| 2003  | 6.4%          | 3.7%         | 5.2%               |
| 2004  | 6.6%          | 3.8%         | 5.4%               |
| 2005  | 6.8%          | 3.9%         | 5.5%               |
| 2006  | 6.9%          | 4.1%         | 5.5%               |
| 2007  | 6.7%          | 4.2%         | 5.5%               |
| 2008  | 6.5%          | 4.3%         | 5.4%               |
| 2009  | 6.1%          | 4.2%         | 5.1%               |
| 2010  | 5.9%          | 4.5%         | 5.2%               |
| 2011  | 5.4%          | 3.8%         | 4.6%               |
| 2012  | 6.5%          | 4.4%         | 5.4%               |
| 2013  | 6.7%          | 4.8%         | 5.7%               |
| 2014  | 5.4%          | 4.0%         | 4.7%               |
| 2015  | 5.2%          | 3.6%         | 4.4%               |
| 2016  | 5.2%          | 3.4%         | 4.3%               |
| 2017  | 5.2%          | 3.3%         | 4.2%               |
| 2018* | 7.3%          | 4.4%         | 5.7%               |

Historical data have been revised.

\*2018 scrappage was affected by one-time enhancements to how branded (scrapped due to collision, fire, flood, etc.) and export vehicles are handled which caused the appearance of increased scrap-page rates.

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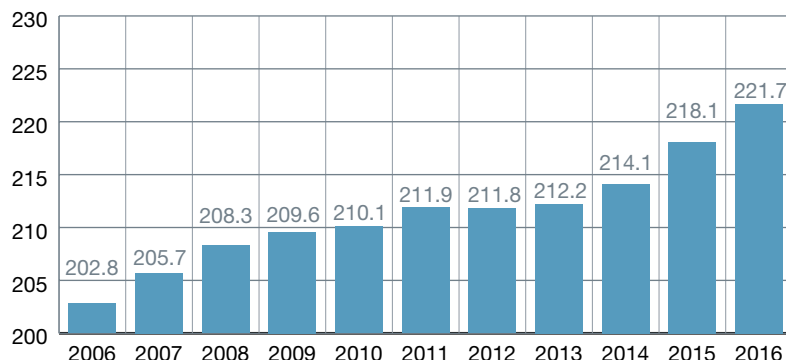
## Average Age of Cars and Light Trucks (2003–2018)

| Year | Passenger Car | Light Trucks | All Light Vehicles |
|------|---------------|--------------|--------------------|
| 2002 | 9.6           | 9.8          | 9.4                |
| 2003 | 9.7           | 9.9          | 9.4                |
| 2004 | 9.7           | 10.0         | 9.4                |
| 2005 | 9.8           | 10.1         | 9.4                |
| 2006 | 9.8           | 10.2         | 9.5                |
| 2007 | 9.9           | 10.3         | 9.6                |
| 2008 | 10.0          | 10.4         | 9.7                |
| 2009 | 10.3          | 10.5         | 10.0               |
| 2010 | 10.6          | 10.8         | 10.4               |
| 2011 | 10.9          | 11.1         | 10.7               |
| 2012 | 11.1          | 11.2         | 11.0               |
| 2013 | 11.3          | 11.3         | 11.2               |
| 2014 | 11.4          | 11.4         | 11.4               |
| 2015 | 11.5          | 11.5         | 11.5               |
| 2016 | 11.6          | 11.6         | 11.6               |
| 2017 | 11.8          | 11.6         | 11.7               |
| 2018 | 11.9          | 11.6         | 11.7               |

Source: Average age calculated from IHS Markit's NVPP® database as of January 1, 2018. © 2018, IHS Markit - Reproduction in whole or in part is prohibited without written permission of IHS Markit, 248-728-7000, www.IHSMarkit.com

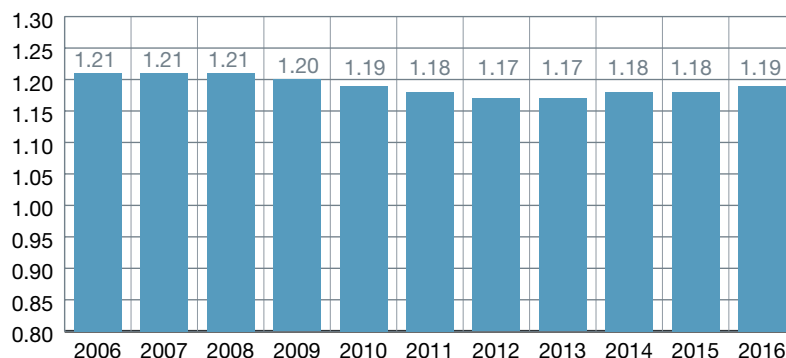
## Total Licensed Drivers, 2006–2016

(Millions of Drivers)



Source: U.S. Department of Transportation

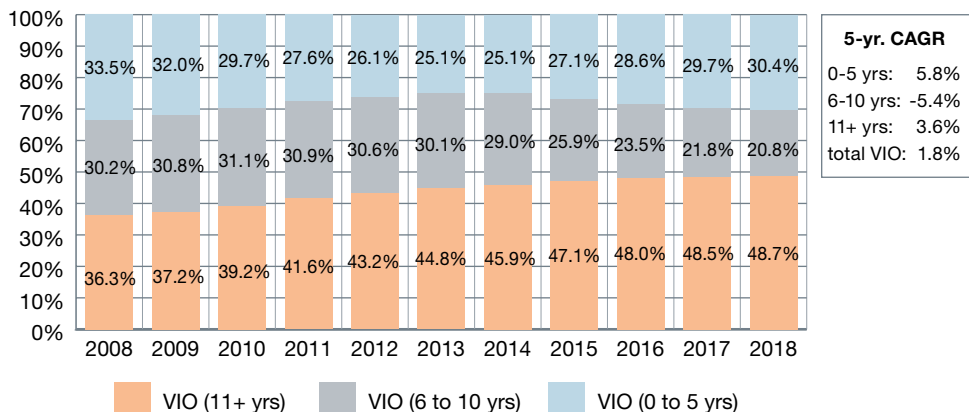
## Registered Light Vehicles Per Licensed Driver, 2006–2016



Note: Historical data have been revised

Sources: Auto Care Industry, U.S. Department of Transportation, IHS Markit

## Age Mix of Vehicles in Year Range Categories, 2008–2018



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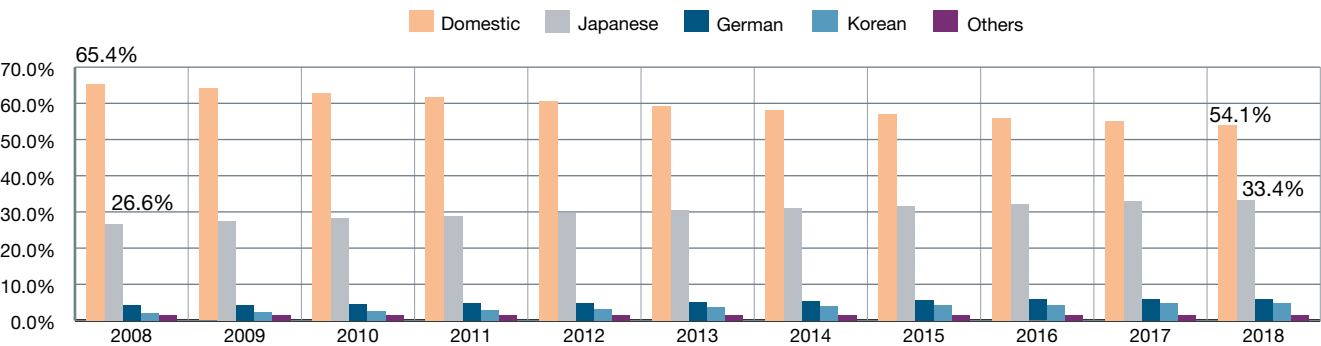


# U.S. Vehicle Population (VIO) Perspective

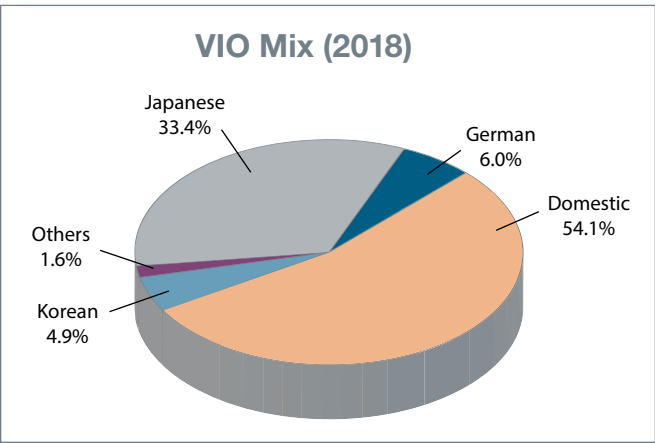
The following table and graphs show the vehicles in operation (VIO) from 2008 to 2018 by make region. The data indicates that American consumers continue to demonstrate a strong preference for imported name plates. Evidence of Americans' penchant for imported vehicles can be found in the VIO mix. In 2008, domestic vehicles comprised 65.4 percent of VIO, but by 2018, the number had declined to 54.1 percent. By contrast, imported vehicles on U.S. roads have grown markedly over the same period with Japanese nameplates increasing from 26.6 percent share in 2008 to 33.4 percent share in 2018. Looking at the 10-year CAGR analysis, domestic nameplates actually declined at a rate of 1.1 percent during the period while Japanese nameplates increased 3.1 percent, German 4.3 percent, and Korean 9.1 percent.

## U.S Vehicles in Operation 2008–2018

(By Make Region)

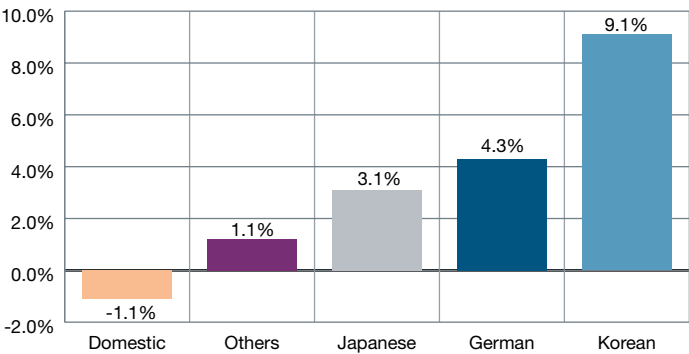


Source: IHS Markit© 2017



Source: IHS Markit© 2018

## 10-Year CAGR 2008–2018



Source: IHS Markit© 2018



# Hybrid Vehicles

Hybrid vehicles employ technology that combines an electric motor with a gasoline engine, rather than a traditional gasoline-powered internal-combustion only power plant. Hybrid vehicles provide better fuel economy and reduced emissions than comparable, standard-powered vehicles; some having the ability to run intermittently in a zero-emissions or “ZEV” mode. Recharging the vehicle’s batteries today is a process that is transparent to the driver, accomplished through a combination of electricity being generated by the on-board gas engine and four-wheel regenerative braking systems that convert kinetic energy to electricity for storage. As this is written, ultra-efficient plug-in hybrids that will extend “ZEV” performance and provide even greater fuel economy are making their way to market.

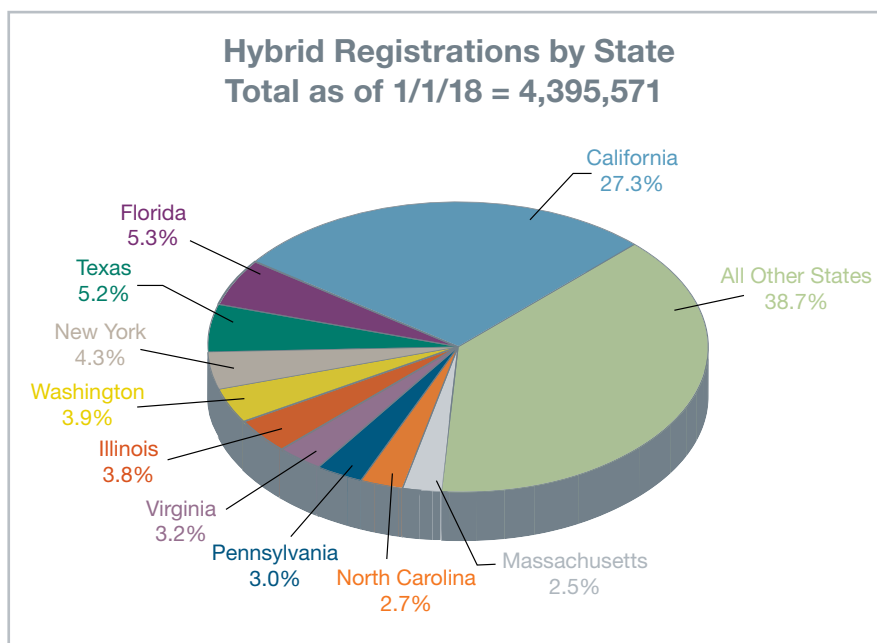
U.S. registrations of hybrid vehicles totaled 4.4 million as of January 1, 2018, an increase of 7.8 percent over last year’s 4.1 million. California accounts for 27.3 percent of the nation’s hybrids, with the next three states, Florida (5.3 percent), Texas (5.2 percent) and New York (4.3 percent) combined to total 14.8 percent.

Of the 3,155,483 hybrids registered from 2012 to 2017, Toyota holds four of the top five model spots with a combined 39.6 percent market share. The Prius is the most popular hybrid model with 696,814 (22.1 percent) of U.S. hybrid registrations, followed by the Camry Hybrid with 202,485 (6.4 percent). Toyota’s Prius C is ranked at number four with 188,853 (6 percent) and rounding off the list at number five is the Prius V with 159,423 (5.1 percent) of registrations. The top non-Toyota hybrid is the Ford Fusion at number two with 252,678 (8 percent).

The number of hybrid vehicles sold in America peaked in 2013 and has fallen since then, both in numbers and in market share. In 2013, a total of 578,413 hybrid vehicles were sold, accounting for 3.8 percent of 15,383,000 total light vehicles. In 2017, hybrids ended the year totaling 559,235 for 3.3 percent market share when Americans bought 17,134,995 vehicles.

## Hybrid Registrations by State

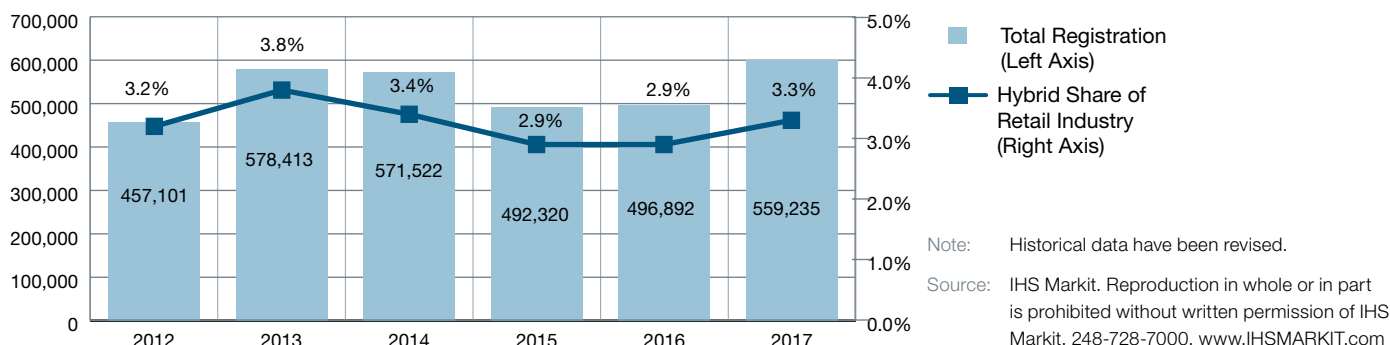
| State            | Total Registrations | % Share       |
|------------------|---------------------|---------------|
| California       | 1,200,638           | 27.3%         |
| Florida          | 233,887             | 5.3%          |
| Texas            | 230,379             | 5.2%          |
| New York         | 189,349             | 4.3%          |
| Washington       | 172,228             | 3.9%          |
| Illinois         | 165,461             | 3.8%          |
| Virginia         | 140,758             | 3.2%          |
| Pennsylvania     | 131,285             | 3.0%          |
| North Carolina   | 120,459             | 2.7%          |
| Massachusetts    | 110,843             | 2.5%          |
| All Other States | 1,700,464           | 38.7%         |
| <b>Total</b>     | <b>4,395,751</b>    | <b>100.0%</b> |



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# Hybrid Vehicles

## Hybrid Vehicle Registration & Retail Share, 2012-2017



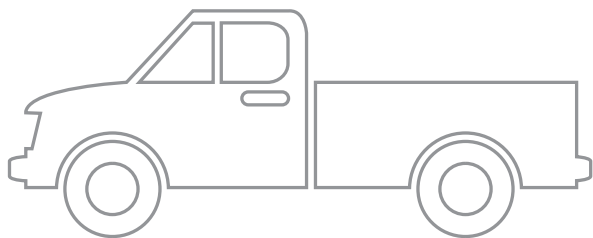
## Hybrid New Registration for Selected Models (Year End 2012-2017)

| Make Model           | 2012           | 2013           | 2014           | 2015           | 2016           | 2017           | 6-Year Total     | % of Total    | CUM. % of Total |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|---------------|-----------------|
| Toyota Prius         | 149,837        | 145,041        | 122,991        | 112,003        | 100,035        | 66,907         | 696,814          | 22.1%         | 22.1%           |
| Ford Fusion          | 13,934         | 42,661         | 47,035         | 34,274         | 48,893         | 65,881         | 252,678          | 8.0%          | 30.1%           |
| Toyota Camry         | 44,936         | 44,448         | 39,711         | 30,360         | 22,165         | 20,865         | 202,485          | 6.4%          | 36.5%           |
| Toyota Prius C       | 34,834         | 41,821         | 40,603         | 38,101         | 20,843         | 12,651         | 188,853          | 6.0%          | 42.5%           |
| Toyota Prius V       | 40,579         | 35,068         | 30,768         | 28,008         | 15,035         | 9,965          | 159,423          | 5.1%          | 47.5%           |
| Ford C-Max           | 12,091         | 35,690         | 27,251         | 21,648         | 18,797         | 17,975         | 133,452          | 4.2%          | 51.8%           |
| Chevrolet Volt       | 22,996         | 22,915         | 18,563         | 15,402         | 24,001         | 20,774         | 124,651          | 4.0%          | 55.7%           |
| Tesla Model S        | 1,825          | 18,001         | 14,411         | 25,295         | 26,071         | 28,086         | 113,689          | 3.6%          | 59.3%           |
| Nissan Leaf          | 9,949          | 22,576         | 29,669         | 17,815         | 13,787         | 11,775         | 105,571          | 3.3%          | 62.7%           |
| Hyundai Sonata       | 16,712         | 21,587         | 19,926         | 18,324         | 16,151         | 10,121         | 102,821          | 3.3%          | 65.9%           |
| Toyota RAV4          | -              | -              | -              | 1,016          | 44,158         | 50,877         | 96,051           | 3.0%          | 69.0%           |
| Lexus CT200H         | 17,929         | 15,138         | 17,838         | 14,564         | 9,033          | 5,103          | 79,605           | 2.5%          | 71.5%           |
| Lexus ES             | 6,542          | 15,957         | 14,990         | 11,061         | 8,158          | 5,546          | 62,254           | 2.0%          | 73.5%           |
| Kia Optima           | 9,591          | 13,517         | 13,698         | 10,990         | 6,917          | 7,092          | 61,805           | 2.0%          | 75.4%           |
| Toyota Avalon        | 566            | 16,164         | 17,151         | 11,937         | 8,429          | 4,908          | 59,155           | 1.9%          | 77.3%           |
| Honda Accord         | -              | 1,324          | 14,291         | 11,306         | 8,594          | 22,334         | 57,849           | 1.8%          | 79.1%           |
| Lexus RX             | 12,032         | 11,278         | 9,458          | 7,696          | 8,715          | 8,556          | 57,735           | 1.8%          | 81.0%           |
| Lincoln MKZ          | 6,146          | 7,292          | 10,111         | 8,267          | 7,115          | 5,993          | 44,924           | 1.4%          | 82.4%           |
| Toyota Prius Plug-In | 12,436         | 11,891         | 13,273         | 4,236          | 51             | -              | 41,887           | 1.3%          | 83.7%           |
| Toyota Highlander    | 5,877          | 5,146          | 3,518          | 3,939          | 5,935          | 16,751         | 41,166           | 1.3%          | 85.0%           |
| Tesla Model X        | -              | -              | -              | 44             | 14,614         | 16,886         | 31,544           | 1.0%          | 86.0%           |
| Honda Civic          | 8,936          | 9,892          | 5,752          | 5,279          | 939            | -              | 30,798           | 1.0%          | 87.0%           |
| BMW I3               | -              | -              | 4,347          | 10,982         | 8,935          | 6,272          | 30,536           | 1.0%          | 88.0%           |
| Kia Niro             | -              | -              | -              | -              | -              | 26,471         | 26,471           | 0.8%          | 88.8%           |
| Fiat 500             | -              | 1,654          | 6,261          | 5,909          | 5,605          | 5,010          | 24,439           | 0.8%          | 89.6%           |
| Chevrolet Bolt       | -              | -              | -              | -              | 213            | 22,904         | 23,117           | 0.7%          | 90.3%           |
| Toyota Prius Prime   | -              | -              | -              | -              | 2,137          | 20,719         | 22,856           | 0.7%          | 91.0%           |
| Honda CR-Z           | 4,239          | 4,492          | 3,439          | 2,944          | 2,276          | 478            | 17,868           | 0.6%          | 91.6%           |
| Subaru Crosstrek     | -              | 266            | 7,787          | 5,550          | 2,293          | 120            | 16,016           | 0.5%          | 92.1%           |
| Honda Insight        | 5,917          | 4,733          | 3,888          | 1,415          | -              | -              | 15,953           | 0.5%          | 92.6%           |
| Volkswagen Golf      | -              | -              | 312            | 4,159          | 3,959          | 3,520          | 11,950           | 0.4%          | 93.0%           |
| BMW X5               | -              | -              | -              | 525            | 5,975          | 4,814          | 11,314           | 0.4%          | 93.4%           |
| Hyundai Ioniq        | -              | -              | -              | -              | -              | 9,817          | 9,817            | 0.3%          | 93.7%           |
| Volkswagen Jetta     | 161            | 5,468          | 2,083          | 722            | 694            | 98             | 9,226            | 0.3%          | 94.0%           |
| Lexus NX             | -              | -              | 298            | 2,497          | 2,769          | 3,212          | 8,776            | 0.3%          | 94.2%           |
| Chevrolet Malibu     | -              | -              | -              | -              | 4,089          | 4,565          | 8,654            | 0.3%          | 94.5%           |
| Ford Focus           | 662            | 1,801          | 1,984          | 1,528          | 872            | 1,783          | 8,630            | 0.3%          | 94.8%           |
| Infiniti Q50         | -              | 1,814          | 3,225          | 1,547          | 917            | 328            | 7,831            | 0.2%          | 95.0%           |
| Chevrolet Spark      | -              | 597            | 1,147          | 2,611          | 3,032          | 14             | 7,401            | 0.2%          | 95.3%           |
| Porsche Cayenne      | 1,075          | 608            | 640            | 1,193          | 2,090          | 1,686          | 7,292            | 0.2%          | 95.5%           |
| Audi A3              | -              | -              | -              | 36             | 4,109          | 2,977          | 7,122            | 0.2%          | 95.7%           |
| Smartcar Fortwo      | 136            | 905            | 2,528          | 1,363          | 661            | 478            | 6,071            | 0.2%          | 95.9%           |
| Autocar Xpeditor XPD | 1,130          | 704            | 806            | 1,016          | 779            | 751            | 5,186            | 0.2%          | 96.1%           |
| Kia Soul EV          | -              | -              | 297            | 1,023          | 1,701          | 2,157          | 5,178            | 0.2%          | 96.2%           |
| All Others           | 10,205         | 14,146         | 16,677         | 12,279         | 12,984         | 26,633         | 92,924           | 2.9%          | 99.2%           |
| <b>GRAND TOTAL</b>   | <b>457,101</b> | <b>578,413</b> | <b>571,522</b> | <b>492,320</b> | <b>496,892</b> | <b>559,235</b> | <b>3,155,483</b> | <b>100.0%</b> |                 |

## Aftermarket Opportunities – Will you capitalize on the growth in vehicles in operation (VIO)?

The global vehicle population of cars and light trucks will grow

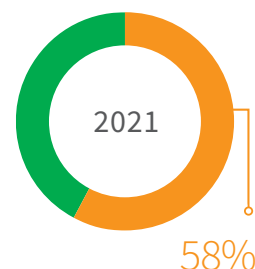
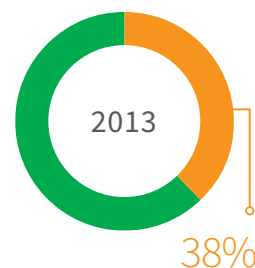
**21%** over the next 7 years



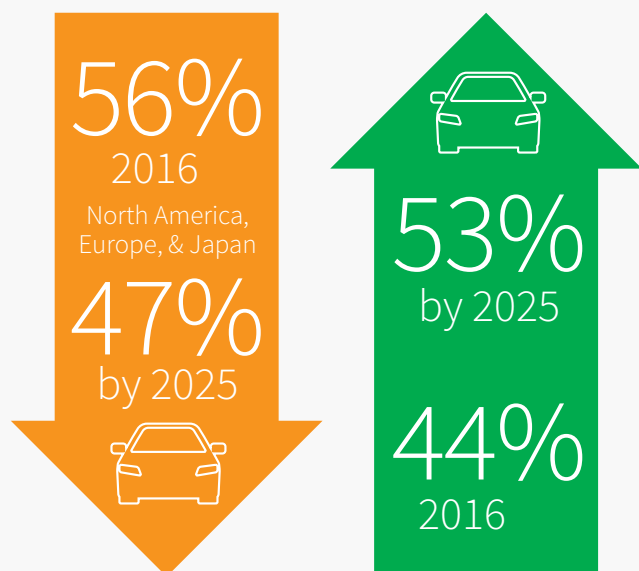
Nearly

**60%**

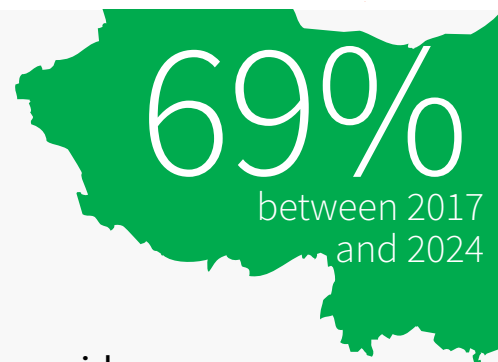
of light vehicles will be produced on global platforms by 2021



Global light vehicle population mix is changing



In China, VIO will Increase



IHS Markit provides detailed VIO Data for

**95%** of the  
**1.3 Billion**  
vehicles around the world



Find out how IHS Markit can help you grow your aftermarket business. Visit: [ihsmarkit.com/worldview](https://ihsmarkit.com/worldview)

# Vehicle Operating Costs

The total, per-mile cost of operating a motor vehicle, as calculated annually by AAA, includes a snapshot of fuel, maintenance, repairs and tire replacement costs across several vehicle types plying American roads. In addition to their relative measurement value, many individuals and businesses rely on per-mile indices to determine mileage reimbursement rates for the following year.

The table below shows the annual total cost of operating a light vehicle, based on cost components such as tire, maintenance, repairs and fuel. Fuel cost was derived from AAA's late-2016 Fuel Gauge Report average cost of \$2.329 per gallon. Comparatively, driving a small sedan was cheaper in 2017, due to lower gas and tire prices, maintenance, etc. Conversely, an SUV 4WD was the most expensive vehicle to drive. For example, the gasoline price of \$2.329 per gallon, combined with improved vehicle gas mileage, raised the per mile fuel cost of SUV 4WD by 0.86 cents from 10.90 in 2016 to 11.76 cents per mile in 2017.

Vehicle operating costs have a tremendous impact on Americans' driving habits. In 2008, the last major fuel-related spike translated to fewer total and average miles driven, less discretionary travel, an increase in the use of public transportation and some sources say, vacations closer to home. With gas prices at the pump not expected to rise above \$3.00 this summer driving season, the trend in discretionary travel for 2018 is uncertain. Nationally, as of March 2018, gas prices averaged \$2.716, up 0.283 cents higher than a year ago prices.

## Light Vehicle Total Operating Costs 2017

(Cents Per Mile)

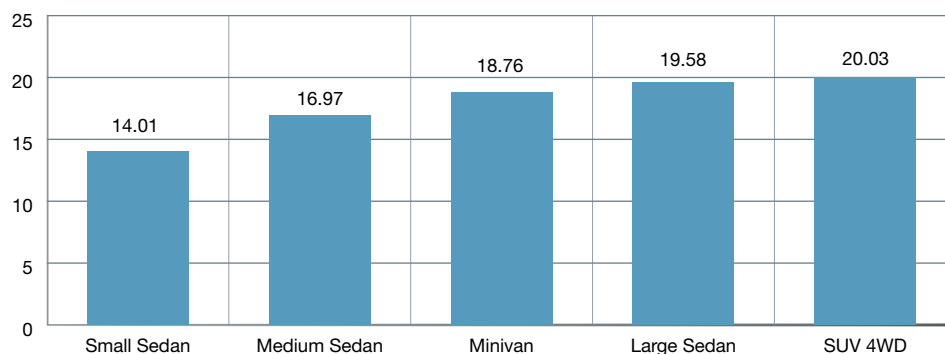
| Operating Costs                | Small Sedan  | Medium Sedan | Minivan      | Large Sedan  | SUV 4WD      |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| Gasoline                       | 7.18         | 9.03         | 10.95        | 11.14        | 11.76        |
| Maintenance, repairs and tires | 6.83         | 7.94         | 7.81         | 8.44         | 8.27         |
| <b>Total Cost Per Mile</b>     | <b>14.01</b> | <b>16.97</b> | <b>18.76</b> | <b>19.58</b> | <b>20.03</b> |

Notes: Fuel costs of \$2.329 per gallon derived from AAA's Q4-2016 Fuel Gauge report  
[www.FuelGaugeReport.com](http://www.FuelGaugeReport.com).

Source: American Automobile Association (AAA)

## Light Vehicle Operating Costs, 2017

(Cents Per Mile)



Source: American Automobile Association (AAA)

# Miles Driven and Vehicle Service Contracts

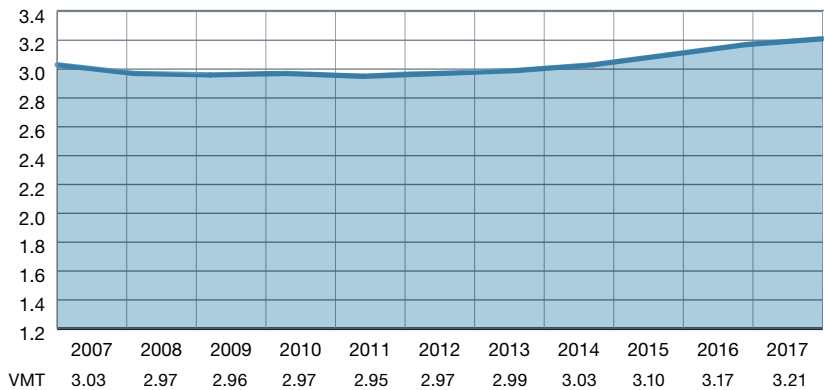
Americans drove 3.21 trillion miles in 2017, another record year. Vehicle miles traveled (VMT) on U.S. roads increased by 1.2 percent, 39.3 billion more miles than were travelled last year. This also marks the sixth consecutive year that miles traveled experienced an increase since its 0.6 percent drop in 2011. Steady job growth, increased productivity, falling unemployment numbers, business investments and low gasoline prices contributed to the increase in miles driven over the past three years.

The nationwide average price per gallon of gasoline (page 70) for all grades in 2017 was \$2.53, up 12.4 percent from \$2.25 in 2016. As of March 2018, the average price per gallon was \$2.72. For the 2018 summer driving season (April-September), the U.S. Department of Energy is forecasting regular gasoline retail prices to average \$2.60 per gallon. Given the projected low gasoline price, some experts are predicting a banner year again on the road for Americans this summer, leading to increased vehicle miles traveled in 2018.

According to estimates by the Warranty Management Professionals, the size of the U.S. extended warranty market was \$44.7 billion in 2017. Since 2010, the industry has grown 59 percent from \$28.1 billion reaching \$44.7 billion in 2017.

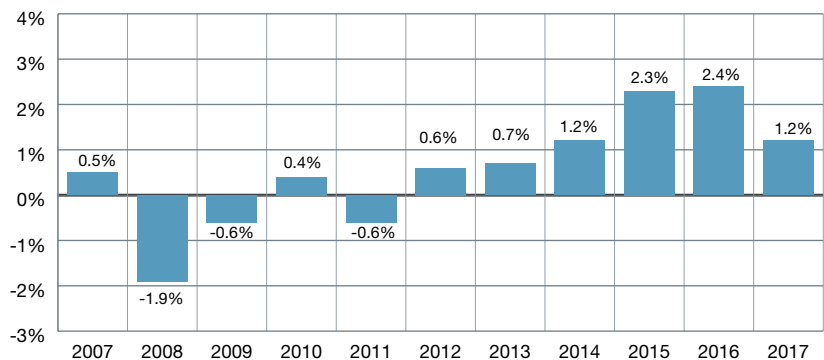
Vehicle Service Contracts (VSC) comprise a major portion of the industry, with a market share of 37 percent, followed by mobile phones (19 percent). Consumers paid \$16.5 billion in premium for VSC in 2017. VSC or an extended auto warranty is an agreement between an administrator and a vehicle owner under which the administrator agrees to replace or repair, for a specific coverage period, designated vehicle parts in the event of a mechanical failure.

**Annual Miles Driven, 2007–2017** (Trillions of Miles)



**Annual Miles Driven, 2007–2017**

(Percent Change from Previous Year)



Note: Historical data have been revised.

Sources: Auto Care Industry, U.S. Department of Transportation / Federal Highway Administration, December 2017

## U.S. Service Contract Market Estimates, 2010–2017

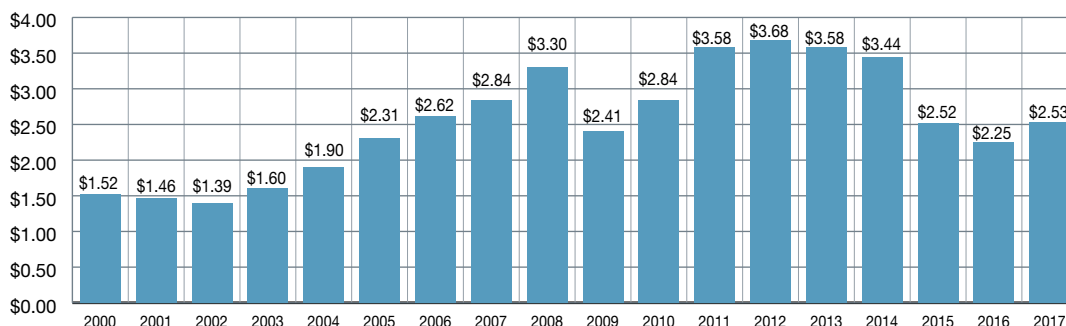
Premiums Paid by Consumers (\$Billion)

|                                   | 2010          | 2011          | 2012          | 2013          | 2014          | 2015          | 2016          | 2017          | % Change<br>2016-2017 | % Change<br>2010-2017 |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|-----------------------|
| Vehicle Service Contract (VSC)    | \$11.2        | \$12.4        | \$14.0        | \$15.0        | \$15.9        | \$16.8        | \$17.0        | \$16.5        | -2.7%                 | 48.0%                 |
| Mobile Phone Insurance            | \$3.8         | \$4.6         | \$5.7         | \$7.8         | \$9.1         | \$9.3         | \$9.5         | \$8.5         | -10.5%                | 126.1%                |
| Retail Consumer Electronics       | \$5.4         | \$6.2         | \$7.0         | \$6.5         | \$6.6         | \$7.0         | \$6.7         | \$6.7         | -0.1%                 | 23.3%                 |
| Computer OEMs                     | \$5.1         | \$5.2         | \$5.2         | \$4.7         | \$4.6         | \$4.5         | \$4.4         | \$4.5         | 1.8%                  | -11.5%                |
| Home Warranty                     | \$1.6         | \$1.6         | \$1.7         | \$1.7         | \$1.8         | \$2.0         | \$2.2         | \$2.5         | 16.4%                 | 63.3%                 |
| Retail Appliance Service Contract | \$1.1         | \$1.2         | \$1.2         | \$1.3         | \$1.5         | \$1.5         | \$1.6         | \$1.5         | -6.2%                 | 35.3%                 |
| Furniture                         | na            | na            | na            | na            | na            | na            | na            | \$1.1         | na                    | na                    |
| Jewelry                           | na            | na            | na            | na            | na            | na            | na            | \$3.3         | na                    | na                    |
| <b>Total</b>                      | <b>\$28.1</b> | <b>\$31.2</b> | <b>\$34.8</b> | <b>\$37.0</b> | <b>\$39.5</b> | <b>\$41.1</b> | <b>\$41.4</b> | <b>\$44.7</b> | <b>7.9%</b>           | <b>59.0%</b>          |

Source: Warranty Week, <http://www.warrantyweek.com/archive/ww20180201.html>

# Gasoline Affordability and Fuel Consumption

## Gasoline Prices, 2000–2017 (Price Per Gallon, All Grades)



Note: Price represents the average price per gallon of gasoline, all grades, in current dollars.

Source: U.S. Department of Energy / Energy Information Administration (EIA) [http://www.eia.gov/dnav/pet/PET\\_PRI\\_GND\\_DCUS\\_NUS\\_A.htm](http://www.eia.gov/dnav/pet/PET_PRI_GND_DCUS_NUS_A.htm)

## Fuel Efficiency and Consumption, 2002–2016

(By Vehicle Type Using USDOT New, Enhanced Methodology)

| Year | Average Fuel Consumption per Vehicle by Vehicle Type / Gallons * |              |                                |                        |                    | Average Miles Traveled per Gallon of Fuel Consumed / Miles * |              |                                |                        |                    |
|------|--|--------------|--------------------------------|------------------------|--------------------|--|--------------|--------------------------------|------------------------|--------------------|
|      | Lt. Duty, Short WB Vehicles (1)                                  | Motor-cycles | Lt. Duty, Long WB Vehicles (2) | Single Unit Trucks (3) | Combination Trucks | Lt. Duty, Short WB Vehicles (1)                              | Motor-cycles | Lt. Duty, Long WB Vehicles (2) | Single Unit Trucks (3) | Combination Trucks |
| 2002 | 500  | 53           | 847                            | 2,106                  | 11,862             | 22.3   | 42.5         | 16.9                           | 7.3                    | 5.9                |
| 2003 | 494  | 50           | 874                            | 2,185                  | 12,259             | 22.4   | 42.6         | 16.9                           | 7.3                    | 5.9                |
| 2004 | 493  | 61           | 902                            | 2,123                  | 12,170             | 22.3   | 42.8         | 16.9                           | 7.3                    | 5.9                |
| 2005 | 488  | 52           | 875                            | 2,021                  | 11,975             | 22.5   | 42.7         | 16.9                           | 7.3                    | 5.9                |
| 2006 | 456  | 67           | 955                            | 2,161                  | 11,487             | 23.1   | 43.0         | 17.1                           | 7.4                    | 6.0                |
| 2007 | 456  | 67           | 942                            | 2,010                  | 11,727             | 22.9   | 42.7         | 17.1                           | 7.3                    | 6.0                |
| 2008 | 435  | 63           | 880                            | 2,068                  | 11,821             | 23.7   | 42.5         | 17.3                           | 7.4                    | 6.0                |
| 2009 | 441  | 60           | 883                            | 1,956                  | 10,748             | 23.8   | 43.2         | 17.4                           | 7.4                    | 6.0                |
| 2010 | 453  | 52           | 898                            | 1,834                  | 11,706             | 23.5   | 43.4         | 17.2                           | 7.3                    | 5.9                |
| 2011 | 460  | 51           | 855                            | 1,814                  | 11,500             | 23.1   | 43.5         | 17.1                           | 7.3                    | 5.8                |
| 2012 | 483  | 58           | 694                            | 1,744                  | 11,310             | 23.3   | 43.5         | 17.1                           | 7.3                    | 5.8                |
| 2013 | 480  | 56           | 683                            | 1,785                  | 11,651             | 23.4   | 43.5         | 17.2                           | 7.3                    | 5.8                |
| 2014 | 476  | 54           | 710                            | 1,788                  | 11,298             | 23.2   | 43.5         | 17.1                           | 7.3                    | 5.8                |
| 2015 | 475  | 52           | 684                            | 1,756                  | 10,515             | 23.9   | 43.8         | 17.3                           | 7.4                    | 5.9                |
| 2016 | 475  | 54           | 689                            | 1,754                  | 10,739             | 24.0   | 43.9         | 17.4                           | 7.4                    | 5.9                |

## Average Annual Miles Traveled, 2002–2016

(By Vehicle Type, Using USDOT New, Enhanced Methodology)

| Year | Actual Miles by Vehicle Type    |              |                                |                        |                     |
|------|---------------------------------|--------------|--------------------------------|------------------------|---------------------|
|      | Lt. Duty, Short WB Vehicles (1) | Motor-cycles | Lt. Duty, Long WB Vehicles (2) | Single Unit Trucks (3) | Combina-tion Trucks |
| 2002 | 11,116                          | 2,232        | 14,304                         | 15,408                 | 69,693              |
| 2003 | 11,062                          | 2,120        | 14,770                         | 15,974                 | 72,503              |
| 2004 | 10,992                          | 2,590        | 15,221                         | 15,507                 | 72,056              |
| 2005 | 10,963                          | 2,212        | 14,797                         | 14,786                 | 71,101              |
| 2006 | 10,540                          | 2,868        | 16,340                         | 15,900                 | 68,783              |
| 2007 | 10,710                          | 2,997        | 14,970                         | 14,782                 | 69,896              |
| 2008 | 10,290                          | 2,684        | 15,256                         | 15,306                 | 71,106              |
| 2009 | 10,380                          | 2,623        | 15,237                         | 14,380                 | 64,132              |
| 2010 | 10,649                          | 2,248        | 15,463                         | 13,469                 | 68,907              |
| 2011 | 10,614                          | 2,221        | 14,596                         | 13,239                 | 66,768              |
| 2012 | 11,265                          | 2,519        | 11,882                         | 12,815                 | 66,161              |
| 2013 | 11,244                          | 2,423        | 11,712                         | 13,116                 | 68,155              |
| 2014 | 11,048                          | 2,372        | 12,138                         | 13,123                 | 65,897              |
| 2015 | 11,327                          | 2,280        | 11,855                         | 12,960                 | 61,978              |
| 2016 | 11,370                          | 2,356        | 11,991                         | 12,958                 | 63,428              |

Notes:

- \* Total fuel consumption figures are derived from state fuel tax records and reflect latest available data.
- \* Current update uses United States Department of Transportation February 2013 enhanced methodology.
- \* VMT data are based on the latest HPMS (Hwy Performance & Monitoring System) data available;
- \* Prior format and vehicle type classification no longer published. Historical data revised; may not match previous.

Definitions:

- (1) Light Duty Vehicles Short WB - passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WB) equal to or less than 121 inches.
- (2) Light Duty Vehicles Long WB - large passenger cars, vans, pickup trucks, and sport/utility vehicles with wheelbases (WB) larger than 121 inches.
- (3) Single-Unit - single frame trucks that have 2-Axles and at least 6 tires or a gross vehicle weight rating exceeding 10,000 lbs.

Source:

U.S. Department of Transportation / Highway Statistics / Annual Vehicle Distance Traveled in Miles and Related Data By Highway Category & Vehicle Type. <http://www.fhwa.dot.gov/policyinformation/statistics/2014vm1.cfm>



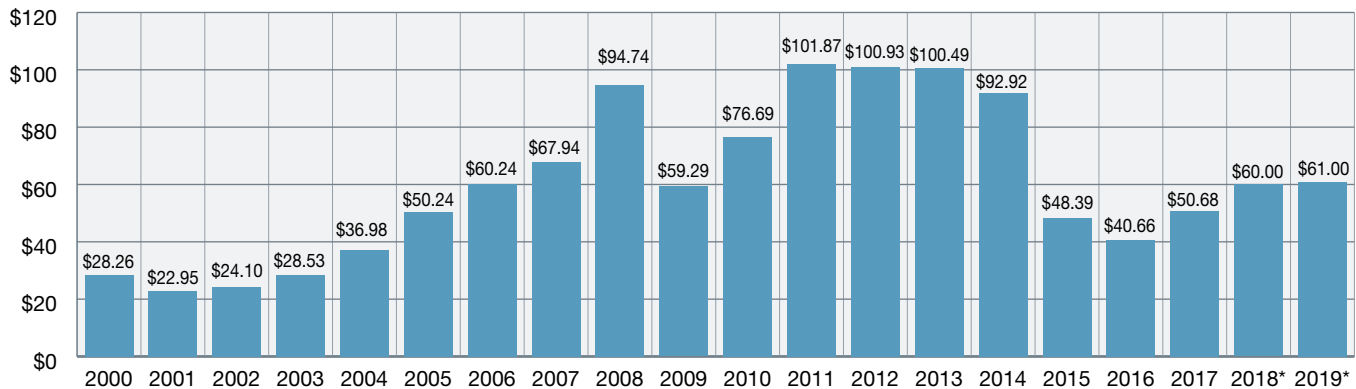
# Crude Oil and Diesel Fuel Costs

Crude oil, which accounts for 65 percent of the cost of gas prices, has seen its price increase 24.6 percent since last year — from \$40.66 per barrel to \$50.68 in 2017. The U.S. Energy Department is forecasting prices to average \$60 per barrel in 2018 and \$61 in 2019. It expects crude oil production by the U.S. and Organization of the Petroleum Exporting Countries' (OPEC) to exceed global consumption levels.

The Producer Price Index (PPI) reports a comparable one-year rise in the price of diesel fuel. Diesel fuel rose 29.4 percent from its 2016 price of \$179.60 to \$232.40 in 2017, after declining from 2013 through 2016. The average price per gallon of diesel fuel has been historically lower than regular gasoline.

The U.S. Energy Information Administration is expecting the average cost of regular unleaded gasoline to spike to \$2.60 per gallon in 2018, up from \$2.53 in 2017. This increase in gasoline price reverses the steady price decreases that consumers have enjoyed over the last four years.

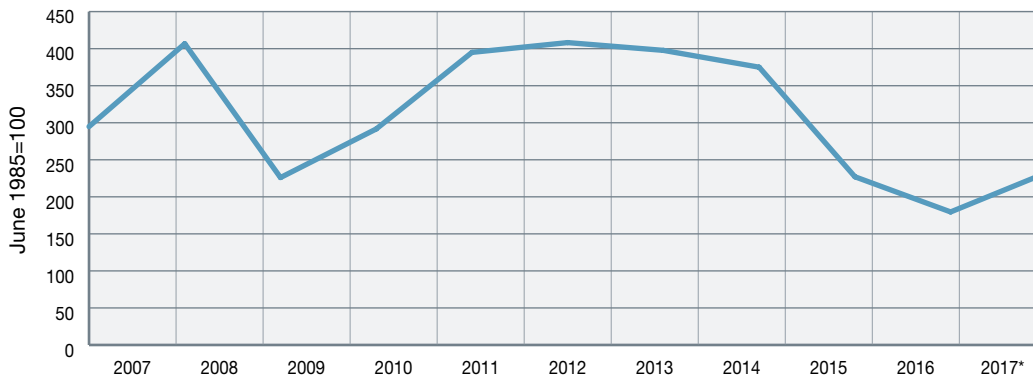
## U.S. Crude Oil Imported Acquisition Cost, 2000-2019 (Dollars Per Barrel)



Note: Historical data have been revised.  
\* Forecast

Source: U.S. Energy Information Administration  
[http://www.eia.gov/dnav/pet/pet\\_pri\\_rac2\\_dcu\\_nus\\_a.htm](http://www.eia.gov/dnav/pet/pet_pri_rac2_dcu_nus_a.htm)

## Producer Price Index for Diesel Fuel, 2007-2017



Note: \* Preliminary

Source: U.S. Department of Labor. Series ID: WPU05730302



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# State Summary Statistics

in this section

## **State Summary Statistics**

Data on the number of establishments by state for automotive product manufacturers, wholesalers, service providers and retailers. This section also includes data on the U.S. population, licensed drivers, miles driven and number of registered vehicles

# State Summary Statistics

## Automotive Manufacturing Establishments, 2016

| State                       | NAICS<br>326211 | NAICS<br>33631 | NAICS<br>33632 | NAICS<br>336330 | NAICS<br>336340 | NAICS<br>336350 | NAICS<br>336360 | NAICS<br>336370 | NAICS<br>336390 | Total<br>for This<br>Group |
|-----------------------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------------|
| Alabama                     | 5               | 15             | 22             | 5               | 11              | 0               | 32              | 24              | 53              | 167                        |
| Alaska                      | 0               | 1              | 0              | 0               | 0               | 0               | 1               | 0               | 2               | 4                          |
| Arizona                     | 1               | 21             | 7              | 5               | 2               | 0               | 6               | 3               | 23              | 68                         |
| Arkansas                    | 2               | 15             | 4              | 2               | 1               | 2               | 5               | 2               | 13              | 46                         |
| California                  | 5               | 121            | 45             | 36              | 14              | 59              | 49              | 14              | 187             | 530                        |
| Colorado                    | 0               | 20             | 3              | 3               | 4               | 11              | 5               | 0               | 21              | 67                         |
| Connecticut                 | 1               | 17             | 9              | 2               | 6               | 6               | 2               | 4               | 13              | 60                         |
| Delaware                    | 1               | 3              | 3              | 0               | 0               | 2               | 1               | 0               | 0               | 10                         |
| District of Columbia        | 0               | 0              | 0              | 0               | 0               | 0               | 0               | 0               | 0               | 0                          |
| Florida                     | 6               | 43             | 41             | 11              | 6               | 27              | 18              | 9               | 66              | 227                        |
| Georgia                     | 9               | 28             | 29             | 10              | 9               | 18              | 21              | 18              | 62              | 204                        |
| Hawaii                      | 0               | 0              | 0              | 0               | 0               | 1               | 0               | 0               | 0               | 1                          |
| Idaho                       | 0               | 7              | 5              | 0               | 3               | 4               | 0               | 0               | 8               | 27                         |
| Illinois                    | 7               | 42             | 59             | 0               | 9               | 42              | 23              | 21              | 90              | 293                        |
| Indiana                     | 2               | 32             | 48             | 18              | 16              | 54              | 37              | 26              | 90              | 323                        |
| Iowa                        | 3               | 11             | 10             | 2               | 0               | 5               | 1               | 9               | 27              | 68                         |
| Kansas                      | 3               | 8              | 8              | 1               | 0               | 2               | 5               | 1               | 14              | 42                         |
| Kentucky                    | 2               | 17             | 17             | 9               | 13              | 19              | 34              | 27              | 58              | 196                        |
| Louisiana                   | 0               | 10             | 3              | 0               | 0               | 4               | 1               | 0               | 11              | 29                         |
| Maine                       | 0               | 4              | 2              | 1               | 0               | 0               | 0               | 0               | 2               | 9                          |
| Maryland                    | 2               | 2              | 3              | 2               | 0               | 5               | 0               | 0               | 12              | 26                         |
| Massachusetts               | 0               | 3              | 9              | 0               | 3               | 2               | 4               | 1               | 5               | 27                         |
| Michigan                    | 3               | 102            | 75             | 24              | 21              | 57              | 79              | 180             | 205             | 746                        |
| Minnesota                   | 1               | 16             | 10             | 5               | 1               | 4               | 5               | 4               | 14              | 60                         |
| Mississippi                 | 4               | 10             | 7              | 2               | 1               | 4               | 12              | 5               | 14              | 59                         |
| Missouri                    | 4               | 30             | 25             | 4               | 5               | 15              | 13              | 9               | 44              | 149                        |
| Montana                     | 0               | 1              | 2              | 0               | 0               | 3               | 2               | 0               | 5               | 13                         |
| Nebraska                    | 0               | 3              | 3              | 2               | 0               | 4               | 3               | 3               | 16              | 34                         |
| Nevada                      | 1               | 21             | 4              | 4               | 1               | 4               | 0               | 0               | 8               | 43                         |
| New Hampshire               | 0               | 9              | 2              | 0               | 2               | 2               | 0               | 1               | 0               | 16                         |
| New Jersey                  | 2               | 8              | 9              | 3               | 2               | 8               | 6               | 1               | 16              | 55                         |
| New Mexico                  | 0               | 4              | 3              | 1               | 0               | 2               | 0               | 1               | 4               | 15                         |
| New York                    | 1               | 35             | 34             | 5               | 3               | 21              | 5               | 5               | 35              | 144                        |
| North Carolina              | 9               | 48             | 10             | 8               | 10              | 27              | 10              | 7               | 51              | 180                        |
| North Dakota                | 0               | 2              | 10             | 0               | 0               | 2               | 2               | 1               | 3               | 20                         |
| Ohio                        | 12              | 65             | 51             | 18              | 27              | 34              | 38              | 99              | 147             | 491                        |
| Oklahoma                    | 4               | 11             | 10             | 2               | 4               | 8               | 4               | 2               | 16              | 61                         |
| Oregon                      | 1               | 8              | 10             | 2               | 2               | 7               | 4               | 2               | 32              | 68                         |
| Pennsylvania                | 4               | 23             | 21             | 7               | 4               | 17              | 9               | 6               | 43              | 134                        |
| Rhode Island                | 0               | 2              | 2              | 0               | 1               | 0               | 0               | 0               | 0               | 5                          |
| South Carolina              | 8               | 22             | 12             | 7               | 8               | 9               | 13              | 8               | 50              | 137                        |
| South Dakota                | 3               | 0              | 1              | 0               | 0               | 0               | 1               | 0               | 10              | 15                         |
| Tennessee                   | 12              | 35             | 27             | 17              | 10              | 14              | 37              | 34              | 64              | 250                        |
| Texas                       | 7               | 63             | 58             | 9               | 7               | 24              | 30              | 12              | 97              | 307                        |
| Utah                        | 0               | 9              | 5              | 1               | 3               | 10              | 3               | 3               | 23              | 57                         |
| Vermont                     | 0               | 2              | 0              | 2               | 0               | 1               | 0               | 0               | 0               | 5                          |
| Virginia                    | 3               | 17             | 18             | 4               | 5               | 10              | 5               | 0               | 19              | 81                         |
| Washington                  | 0               | 16             | 17             | 2               | 1               | 4               | 7               | 0               | 29              | 76                         |
| West Virginia               | 0               | 3              | 3              | 0               | 2               | 0               | 0               | 3               | 8               | 19                         |
| Wisconsin                   | 0               | 24             | 19             | 0               | 4               | 9               | 11              | 7               | 31              | 105                        |
| Wyoming                     | 0               | 2              | 0              | 2               | 0               | 0               | 0               | 0               | 2               | 6                          |
| <b>United States (2016)</b> | <b>128</b>      | <b>1,011</b>   | <b>775</b>     | <b>238</b>      | <b>221</b>      | <b>563</b>      | <b>544</b>      | <b>552</b>      | <b>1,743</b>    | <b>5,775</b>               |
| United States (2015)        | 133             | 996            | 783            | 251             | 219             | 584             | 529             | 545             | 1,722           | 5,779                      |
| United States (2014)        | 129             | 1,009          | 789            | 236             | 230             | 591             | 500             | 543             | 1,705           | 5,752                      |

Historical data for 2014 and 2015 have been revised.

Source: Bureau of Labor Statistics

Notes: Numbers may not add up because of state non-disclosure standards and data suppression.

NAICS 326211 Tire manufacturing except retreading; NAICS 33631 Motor vehicle gasoline engine and parts manufacturing; NAICS 33632 Motor vehicle electric equipment manufacturing; NAICS 336330 Motor vehicle steering and suspension parts; NAICS 336340 Motor vehicle brake system manufacturing; NAICS 336350 Motor vehicle power train components manufacturing; NAICS 336360 Motor vehicle seating and interior trim manufacturing; NAICS 336370 Motor vehicle metal stamping. NAICS 339390 Other vehicle parts manufacturing. For a more detailed description of NAICS codes, refer to page 106.

# State Summary Statistics

## Automotive Products Wholesale, Service and Repair Establishments, 2016

| State                       | Wholesale     |              | Service Stations |               | Repair Shops  |              |              |               |              |
|-----------------------------|---------------|--------------|------------------|---------------|---------------|--------------|--------------|---------------|--------------|
|                             | NAICS 423120  | NAICS 423130 | NAICS 447110     | NAICS 447190  | NAICS 811111  | NAICS 811112 | NAICS 811113 | NAICS 811121  | NAICS 811191 |
| Alabama                     | 159           | 30           | 3,170            | 89            | 886           | 31           | 88           | 578           | 178          |
| Alaska                      | 13            | 2            | 142              | 28            | 146           | 0            | 11           | 46            | 8            |
| Arizona                     | 239           | 34           | 1,293            | 59            | 1,185         | 26           | 86           | 431           | 45           |
| Arkansas                    | 98            | 25           | 1,485            | 103           | 535           | 22           | 54           | 365           | 94           |
| California                  | 1,762         | 202          | 5,873            | 831           | 8,868         | 214          | 497          | 3,698         | 678          |
| Colorado                    | 239           | 51           | 1,470            | 67            | 1,463         | 32           | 90           | 679           | 165          |
| Connecticut                 | 130           | 17           | 806              | 240           | 992           | 37           | 54           | 427           | 67           |
| Delaware                    | 51            | 6            | 167              | 17            | 248           | 7            | 15           | 71            | 14           |
| District of Columbia        | 6             | 0            | 63               | 16            | 51            | 0            | 1            | 11            | 1            |
| Florida                     | 909           | 153          | 5,542            | 269           | 5,166         | 102          | 326          | 2,167         | 453          |
| Georgia                     | 346           | 87           | 4,878            | 219           | 2,209         | 79           | 168          | 105           | 272          |
| Hawaii                      | 22            | 10           | 200              | 32            | 261           | 3            | 14           | 126           | 15           |
| Idaho                       | 85            | 12           | 550              | 35            | 459           | 13           | 27           | 222           | 55           |
| Illinois                    | 594           | 79           | 2,930            | 316           | 3,876         | 178          | 167          | 1,712         | 254          |
| Indiana                     | 344           | 44           | 2,299            | 183           | 1,634         | 105          | 104          | 779           | 149          |
| Iowa                        | 169           | 21           | 1,629            | 129           | 1,031         | 31           | 48           | 489           | 56           |
| Kansas                      | 128           | 11           | 895              | 115           | 839           | 14           | 34           | 399           | 32           |
| Kentucky                    | 165           | 31           | 2,026            | 168           | 819           | 51           | 69           | 450           | 162          |
| Louisiana                   | 156           | 32           | 2,384            | 131           | 830           | 32           | 75           | 476           | 149          |
| Maine                       | 52            | 16           | 663              | 83            | 656           | 5            | 15           | 164           | 28           |
| Maryland                    | 221           | 31           | 1,127            | 253           | 1,772         | 40           | 57           | 532           | 107          |
| Massachusetts               | 182           | 23           | 1,225            | 667           | 2,015         | 98           | 67           | 1,024         | 129          |
| Michigan                    | 582           | 61           | 2,805            | 258           | 2,422         | 117          | 152          | 1,090         | 380          |
| Minnesota                   | 264           | 42           | 1,832            | 178           | 1,414         | 27           | 69           | 714           | 133          |
| Mississippi                 | 87            | 13           | 2,040            | 64            | 507           | 24           | 46           | 359           | 119          |
| Missouri                    | 252           | 41           | 2,341            | 226           | 1,653         | 81           | 100          | 868           | 196          |
| Montana                     | 55            | 6            | 426              | 43            | 377           | 14           | 23           | 178           | 40           |
| Nebraska                    | 101           | 22           | 852              | 92            | 676           | 17           | 35           | 352           | 42           |
| Nevada                      | 82            | 17           | 677              | 36            | 521           | 9            | 40           | 231           | 57           |
| New Hampshire               | 43            | 14           | 507              | 52            | 649           | 19           | 17           | 191           | 35           |
| New Jersey                  | 380           | 52           | 765              | 1,237         | 2,494         | 89           | 113          | 1,030         | 119          |
| New Mexico                  | 58            | 16           | 601              | 56            | 450           | 13           | 28           | 184           | 83           |
| New York                    | 700           | 89           | 3,242            | 1,010         | 5,319         | 136          | 244          | 2,130         | 179          |
| North Carolina              | 343           | 86           | 4,111            | 279           | 2,617         | 69           | 124          | 1,024         | 294          |
| North Dakota                | 61            | 10           | 376              | 38            | 245           | 4            | 16           | 175           | 14           |
| Ohio                        | 466           | 71           | 3,299            | 392           | 2,971         | 137          | 167          | 1,212         | 325          |
| Oklahoma                    | 93            | 24           | 1,714            | 98            | 838           | 29           | 63           | 485           | 104          |
| Oregon                      | 166           | 13           | 649              | 275           | 1,069         | 34           | 68           | 455           | 145          |
| Pennsylvania                | 595           | 109          | 3,138            | 484           | 4,492         | 35           | 180          | 1,546         | 183          |
| Rhode Island                | 45            | 2            | 232              | 71            | 337           | 18           | 11           | 190           | 19           |
| South Carolina              | 128           | 40           | 2,161            | 70            | 963           | 24           | 69           | 463           | 88           |
| South Dakota                | 49            | 11           | 538              | 68            | 300           | 11           | 20           | 201           | 18           |
| Tennessee                   | 310           | 61           | 3,158            | 161           | 1,168         | 58           | 105          | 619           | 177          |
| Texas                       | 905           | 227          | 8,671            | 816           | 5,475         | 191          | 361          | 2,221         | 878          |
| Utah                        | 129           | 21           | 754              | 47            | 718           | 30           | 58           | 322           | 128          |
| Vermont                     | 33            | 5            | 384              | 46            | 324           | 6            | 5            | 86            | 12           |
| Virginia                    | 302           | 42           | 2,861            | 323           | 2,239         | 56           | 99           | 744           | 143          |
| Washington                  | 263           | 41           | 1,656            | 101           | 1,608         | 52           | 117          | 694           | 233          |
| West Virginia               | 47            | 11           | 970              | 44            | 425           | 29           | 21           | 172           | 32           |
| Wisconsin                   | 225           | 16           | 2,302            | 111           | 1,661         | 83           | 55           | 733           | 143          |
| Wyoming                     | 24            | 3            | 256              | 45            | 204           | 3            | 7            | 92            | 24           |
| <b>United States (2016)</b> | <b>12,858</b> | <b>2,083</b> | <b>94,135</b>    | <b>10,771</b> | <b>80,077</b> | <b>2,535</b> | <b>4,480</b> | <b>33,712</b> | <b>7,454</b> |
| United States (2015)        | 12,889        | 1,993        | 93,832           | 11,129        | 79,500        | 2,669        | 4,653        | 34,510        | 7,354        |
| United States (2014)        | 12,999        | 1,910        | 93,232           | 11,456        | 79,240        | 2,759        | 4,775        | 34,381        | 7,368        |

Historical data for 2014 and 2015 have been revised.

Source: Bureau of Labor Statistics

Notes: Numbers may not add up because of state non-disclosure standards and data suppression.

NAICS 423120 New motor vehicle parts merchant wholesalers; NAICS 423130 Tire and tube merchant wholesalers; NAICS 447110 Gasoline stations with convenience stores; NAICS 447190 Other gasoline stations; NAICS 811111 General automotive repair; NAICS 811112 Automotive exhaust system repair; NAICS 811113 Automotive transmission repair; NAICS 811121 Automotive body and interior repair; NAICS 811191 Automotive oil change and lubrication shops.  
For a more detailed description of NAICS codes, refer to page 106.



# State Summary Statistics

## Automotive Product Retail Establishments, Population, Licensed Drivers, Miles Driven and Registered Vehicles, 2016

| State                       | Retail        |               |               | Population <sup>2</sup> | Licensed Drivers <sup>3</sup> | Miles Driven (Millions) <sup>3</sup> | Light Vehicle Registrations <sup>4</sup> | Medium and Heavy Vehicle Registrations |
|-----------------------------|---------------|---------------|---------------|-------------------------|-------------------------------|--------------------------------------|--|--|
|                             | NAICS 4411101 | NAICS 441310  | NAICS 441320  |                         |                               |                                      |  |  |
| Alabama                     | 270           | 784           | 494           | 4,860,545               | 3,943,082                     | 69,227                               | 4,806,245                                | 133,840                                |
| Alaska                      | 29            | 84            | 33            | 741,522                 | 534,585                       | 5,259                                | 661,306                                  | 25,341                                 |
| Arizona                     | 245           | 505           | 403           | 6,908,642               | 5,082,305                     | 65,786                               | 5,907,173                                | 209,542                                |
| Arkansas                    | 211           | 504           | 250           | 2,988,231               | 2,391,103                     | 35,755                               | 2,597,845                                | 86,028                                 |
| California                  | 1,330         | 3,516         | 2,090         | 39,296,476              | 26,199,436                    | 340,115                              | 30,621,730                               | 663,294                                |
| Colorado                    | 244           | 604           | 398           | 5,530,105               | 4,066,580                     | 52,152                               | 5,058,381                                | 121,548                                |
| Connecticut                 | 253           | 297           | 163           | 3,587,685               | 2,611,007                     | 31,639                               | 3,022,445                                | 60,124                                 |
| Delaware                    | 53            | 86            | 51            | 952,698                 | 756,328                       | 10,178                               | 831,199                                  | 24,038                                 |
| District of Columbia        | n/a           | 8             | 10            | 684,336                 | 489,831                       | 3,622                                | 339,742                                  | 7,564                                  |
| Florida                     | 860           | 2,915         | 1,612         | 20,656,589              | 14,675,160                    | 215,551                              | 16,526,947                               | 312,235                                |
| Georgia                     | 488           | 1,189         | 863           | 10,313,620              | 6,975,900                     | 122,802                              | 8,777,330                                | 255,426                                |
| Hawaii                      | 68            | 132           | 48            | 1,428,683               | 931,703                       | 10,635                               | 1,171,426                                | 21,252                                 |
| Idaho                       | 95            | 222           | 143           | 1,680,026               | 1,160,922                     | 17,199                               | 1,651,223                                | 63,869                                 |
| Illinois                    | 714           | 1,223         | 435           | 12,835,726              | 8,514,644                     | 107,314                              | 10,460,292                               | 400,990                                |
| Indiana                     | 391           | 844           | 400           | 6,634,007               | 4,553,259                     | 83,183                               | 5,823,946                                | 464,508                                |
| Iowa                        | 292           | 479           | 260           | 3,130,869               | 2,245,640                     | 33,337                               | 3,076,714                                | 138,684                                |
| Kansas                      | 213           | 453           | 254           | 2,907,731               | 2,030,025                     | 32,103                               | 2,763,156                                | 126,821                                |
| Kentucky                    | 240           | 751           | 324           | 4,436,113               | 3,031,447                     | 49,313                               | 3,924,960                                | 119,548                                |
| Louisiana                   | 272           | 698           | 371           | 4,686,157               | 3,395,095                     | 49,156                               | 3,769,566                                | 109,986                                |
| Maine                       | 108           | 232           | 87            | 1,330,232               | 1,021,332                     | 14,838                               | 1,230,246                                | 42,465                                 |
| Maryland                    | 294           | 529           | 307           | 6,024,752               | 4,264,875                     | 59,137                               | 4,727,501                                | 109,836                                |
| Massachusetts               | 389           | 623           | 316           | 6,823,721               | 5,040,662                     | 61,825                               | 5,181,234                                | 121,595                                |
| Michigan                    | 611           | 989           | 397           | 9,933,445               | 7,074,674                     | 99,433                               | 8,445,828                                | 216,511                                |
| Minnesota                   | 332           | 747           | 292           | 5,525,050               | 3,377,910                     | 59,029                               | 4,988,150                                | 190,832                                |
| Mississippi                 | 174           | 561           | 316           | 2,985,415               | 2,018,862                     | 40,755                               | 2,661,679                                | 67,337                                 |
| Missouri                    | 377           | 799           | 510           | 6,091,176               | 4,249,579                     | 74,019                               | 5,605,337                                | 195,229                                |
| Montana                     | 100           | 192           | 126           | 1,038,656               | 797,145                       | 12,599                               | 1,304,216                                | 68,269                                 |
| Nebraska                    | 160           | 311           | 191           | 1,907,603               | 1,404,479                     | 20,700                               | 1,950,318                                | 123,027                                |
| Nevada                      | 97            | 266           | 192           | 2,939,254               | 1,872,376                     | 26,788                               | 2,257,426                                | 40,447                                 |
| New Hampshire               | 134           | 233           | 104           | 1,335,015               | 1,096,234                     | 13,513                               | 1,267,022                                | 34,373                                 |
| New Jersey                  | 450           | 740           | 289           | 8,978,416               | 6,238,436                     | 77,093                               | 7,192,032                                | 219,586                                |
| New Mexico                  | 112           | 247           | 155           | 2,085,432               | 1,521,785                     | 27,886                               | 1,835,791                                | 51,832                                 |
| New York                    | 853           | 1,393         | 630           | 19,836,286              | 11,947,568                    | 122,930                              | 11,650,795                               | 383,366                                |
| North Carolina              | 578           | 1,426         | 835           | 10,156,689              | 7,267,042                     | 116,749                              | 8,680,001                                | 286,333                                |
| North Dakota                | 79            | 152           | 69            | 755,548                 | 555,935                       | 9,739                                | 772,114                                  | 78,014                                 |
| Ohio                        | 712           | 1,616         | 779           | 11,622,554              | 7,974,951                     | 118,608                              | 10,541,047                               | 341,589                                |
| Oklahoma                    | 258           | 572           | 315           | 3,921,207               | 2,498,178                     | 49,013                               | 4,307,629                                | 133,084                                |
| Oregon                      | 218           | 523           | 274           | 4,085,989               | 2,855,746                     | 36,719                               | 3,617,500                                | 104,554                                |
| Pennsylvania                | 867           | 1,214         | 695           | 12,787,085              | 8,996,815                     | 101,362                              | 11,862,310                               | 398,354                                |
| Rhode Island                | 53            | 105           | 39            | 1,057,566               | 753,143                       | 7,927                                | 844,391                                  | 18,195                                 |
| South Carolina              | 251           | 700           | 374           | 4,959,822               | 3,746,681                     | 54,553                               | 4,739,368                                | 109,405                                |
| South Dakota                | 88            | 164           | 68            | 861,542                 | 622,663                       | 9,507                                | 922,488                                  | 57,487                                 |
| Tennessee                   | 331           | 720           | 425           | 6,649,404               | 5,197,904                     | 76,884                               | 5,919,591                                | 93,359                                 |
| Texas                       | 1,171         | 3,127         | 1,751         | 27,904,862              | 15,879,876                    | 271,263                              | 21,870,317                               | 619,566                                |
| Utah                        | 136           | 348           | 234           | 3,044,321               | 1,960,366                     | 31,449                               | 2,473,961                                | 54,043                                 |
| Vermont                     | 82            | 112           | 37            | 623,354                 | 553,670                       | 7,382                                | 566,467                                  | 20,664                                 |
| Virginia                    | 459           | 928           | 533           | 8,414,380               | 5,912,048                     | 84,463                               | 7,429,903                                | 184,827                                |
| Washington                  | 314           | 678           | 436           | 7,280,934               | 5,635,715                     | 61,018                               | 6,578,046                                | 176,757                                |
| West Virginia               | 135           | 333           | 152           | 1,828,637               | 1,159,348                     | 19,539                               | 1,561,163                                | 48,290                                 |
| Wisconsin                   | 465           | 665           | 274           | 5,772,917               | 4,206,770                     | 64,046                               | 5,205,295                                | 198,904                                |
| Wyoming                     | 52            | 69            | 66            | 584,910                 | 421,098                       | 9,323                                | 625,938                                  | 31,455                                 |
| <b>United States (2016)</b> | <b>16,708</b> | <b>36,608</b> | <b>19,870</b> | <b>323,405,935</b>      | <b>221,711,918</b>            | <b>3,174,408</b>                     | <b>270,606,730</b>                       | <b>8,164,223</b>                       |
| United States (2015)        | 16,545        | 36,453        | 19,863        | 321,039,839             | 218,084,465                   | 3,095,373                            | 264,194,365                              | 7,973,122                              |
| United States (2014)        | 16,396        | 36,444        | 19,931        | 318,622,525             | 211,814,830                   | 3,025,656                            | 258,026,929                              | 7,838,801                              |

Historical data for 2014 and 2015 have been revised.

**Notes:** Numbers may not add up because of state non-disclosure standards and data suppression. NAICS 441110 New car dealers; NAICS 441310 Automotive parts and accessories stores; NAICS 441320 Tire dealers. For a more detailed description of NAICS codes, refer to page 106. Light Vehicle (GVW 1-3) registrations are as of January 1, 2017. Medium/Heavy Truck (GVW 4-8) registrations are as of January 1, 2017.

**Sources:** <sup>1</sup> National Automobile Dealers Association (NADA), <sup>2</sup> U.S. Census Bureau, <sup>3</sup> U.S. Department of Transportation, Bureau of Labor Statistics, <sup>4</sup> IHS Markit NVPP® database. © 2017 IHS Markit. Reproduction in whole or in part is prohibited without written permission of IHS Markit. 248-728-7000, www.ihsmarkit.com.



# State Summary Statistics

## Automotive Products Car Dealerships, Population and Registered Vehicles, 2017

|                             | Retail                       |                         |  |  |                           |
|-----------------------------|------------------------------|-------------------------|--|--|---------------------------|
| State                       | New Car Dealers <sup>1</sup> | Population <sup>2</sup> | Light Vehicle Registrations <sup>3</sup> | Medium/Heavy Vehicles Registrations <sup>4</sup> | Persons per Light Vehicle |
| Alabama                     | 270                          | 4,874,747               | 4,856,929                                | 136,391  | 1.0                       |
| Alaska                      | 29                           | 739,795                 | 620,272                                  | 24,947   | 1.2                       |
| Arizona                     | 248                          | 7,016,270               | 6,103,069                                | 222,893  | 1.1                       |
| Arkansas                    | 210                          | 3,004,279               | 2,619,998                                | 84,942   | 1.1                       |
| California                  | 1,339                        | 39,536,653              | 30,954,944                               | 681,566  | 1.3                       |
| Colorado                    | 245                          | 5,607,154               | 5,206,804                                | 125,029  | 1.1                       |
| Connecticut                 | 254                          | 3,588,184               | 3,029,108                                | 60,361   | 1.2                       |
| Delaware                    | 54                           | 961,939                 | 833,720                                  | 24,422   | 1.2                       |
| District of Columbia        | n/a                          | 693,972                 | 342,153                                  | 7,583  | 2.0                       |
| Florida                     | 865                          | 20,984,400              | 16,607,754                               | 345,241  | 1.3                       |
| Georgia                     | 488                          | 10,429,379              | 8,773,728                                | 251,480  | 1.2                       |
| Hawaii                      | 68                           | 1,427,538               | 1,204,808                                | 22,980   | 1.2                       |
| Idaho                       | 98                           | 1,716,943               | 1,707,377                                | 64,959   | 1.0                       |
| Illinois                    | 716                          | 12,802,023              | 10,527,837                               | 402,395  | 1.2                       |
| Indiana                     | 395                          | 6,666,818               | 5,866,993                                | 470,861  | 1.1                       |
| Iowa                        | 288                          | 3,145,711               | 3,100,325                                | 137,092  | 1.0                       |
| Kansas                      | 216                          | 2,913,123               | 2,778,564                                | 107,413  | 1.0                       |
| Kentucky                    | 243                          | 4,454,189               | 3,972,351                                | 120,514  | 1.1                       |
| Louisiana                   | 276                          | 4,684,333               | 3,760,452                                | 107,968  | 1.2                       |
| Maine                       | 115                          | 1,335,907               | 1,236,210                                | 42,807   | 1.1                       |
| Maryland                    | 300                          | 6,052,177               | 4,676,818                                | 110,410  | 1.3                       |
| Massachusetts               | 390                          | 6,859,819               | 5,244,044                                | 124,426  | 1.3                       |
| Michigan                    | 612                          | 9,962,311               | 8,770,481                                | 219,180  | 1.1                       |
| Minnesota                   | 332                          | 5,576,606               | 5,121,130                                | 188,684  | 1.1                       |
| Mississippi                 | 174                          | 2,984,100               | 2,759,708                                | 71,911   | 1.1                       |
| Missouri                    | 383                          | 6,113,532               | 5,540,726                                | 198,646  | 1.1                       |
| Montana                     | 99                           | 1,050,493               | 1,322,851                                | 58,399   | 0.8                       |
| Nebraska                    | 160                          | 1,920,076               | 1,946,533                                | 123,163  | 1.0                       |
| Nevada                      | 98                           | 2,998,039               | 2,298,174                                | 41,455   | 1.3                       |
| New Hampshire               | 135                          | 1,342,795               | 1,289,033                                | 35,499   | 1.0                       |
| New Jersey                  | 455                          | 9,005,644               | 7,202,873                                | 218,037  | 1.3                       |
| New Mexico                  | 114                          | 2,088,070               | 1,826,846                                | 51,257   | 1.1                       |
| New York                    | 856                          | 19,849,399              | 11,606,541                               | 383,374  | 1.7                       |
| North Carolina              | 582                          | 10,273,419              | 8,504,641                                | 290,908  | 1.2                       |
| North Dakota                | 78                           | 755,393                 | 772,484                                  | 75,562   | 1.0                       |
| Ohio                        | 716                          | 11,658,609              | 10,630,184                               | 346,456  | 1.1                       |
| Oklahoma                    | 260                          | 3,930,864               | 4,380,661                                | 130,068  | 0.9                       |
| Oregon                      | 220                          | 4,142,776               | 3,704,731                                | 105,485  | 1.1                       |
| Pennsylvania                | 874                          | 12,805,537              | 11,868,587                               | 414,440  | 1.1                       |
| Rhode Island                | 53                           | 1,059,639               | 859,655                                  | 18,527   | 1.2                       |
| South Carolina              | 251                          | 5,024,369               | 4,700,984                                | 112,600  | 1.1                       |
| South Dakota                | 88                           | 869,666                 | 943,511                                  | 58,318   | 0.9                       |
| Tennessee                   | 334                          | 6,715,984               | 5,925,388                                | 84,549   | 1.1                       |
| Texas                       | 1,178                        | 28,304,596              | 22,061,000                               | 631,618  | 1.3                       |
| Utah                        | 139                          | 3,101,833               | 2,558,365                                | 54,914   | 1.2                       |
| Vermont                     | 82                           | 623,657                 | 567,539                                  | 20,653   | 1.1                       |
| Virginia                    | 460                          | 8,470,020               | 7,451,734                                | 184,887  | 1.1                       |
| Washington                  | 314                          | 7,405,743               | 6,225,187                                | 165,722  | 1.2                       |
| West Virginia               | 137                          | 1,815,857               | 1,582,888                                | 48,421   | 1.1                       |
| Wisconsin                   | 470                          | 5,795,483               | 5,271,867                                | 201,796  | 1.1                       |
| Wyoming                     | 51                           | 579,315                 | 623,052                                  | 31,122   | 0.9                       |
| <b>United States (2017)</b> | <b>16,812</b>                | <b>325,719,178</b>      | <b>272,341,612</b>                       | <b>8,242,331</b>                                 | <b>1.2</b>                |
| United States (2016)        | 16,708                       | 323,405,935             | 270,606,730                              | 8,164,223  | 1.2                       |
| United States (2015)        | 16,545                       | 321,039,839             | 264,194,351                              | 7,973,122  | 1.2                       |

Historical data for 2015 and 2016 have been revised.

**Notes:** Numbers may not add up because of state non-disclosure standards and data suppression. NAICS 441110 New car dealers; NAICS 441310 Automotive parts and accessories stores; NAICS 441320 Tire dealers. For a more detailed description of NAICS codes, refer to page 106. Light Vehicle (GVW 1-3) registrations are as of January 1, 2017. Medium/Heavy Truck (GVW 4-8) registrations are as of January 1, 2017.

**Sources:** <sup>1</sup> National Automobile Dealers Association (NADA), <sup>2</sup> U.S. Census Bureau, <sup>3</sup> U.S. Department of Transportation, Bureau of Labor Statistics, <sup>4</sup> IHS Markit NVPP® database. © 2017 IHS Markit. Reproduction in whole or in part is prohibited without written permission of IHS Markit. 248-728-7000, www.ihsmarkit.com.

# available summer 2018



## Purchasing Trends Study: Tools and Equipment 2018

The upcoming Auto Care Association *Purchasing Trends Study: Tools and Equipment 2018* will provide insight into the overall factors influencing tool purchasing decisions, online tool and equipment purchasing experiences, type of tools and equipment planned for future purchases and percent of tools and equipment purchased online.

### PRODUCT #75074

\$250 MEMBER

\$750 NON-MEMBER

### ORDER ONLINE

[autocare.org/market-intelligence](http://autocare.org/market-intelligence)



# Global Auto Care Industry

in this section

## **Aftermarket Dynamics**

Updates on macroeconomic issues and global automotive trends

## **U.S. Trade Data By Country**

U.S. Automotive Parts Exports and Imports (NAICS 3363) tables provide an 11-year summary from 2005 to 2015 for the major trading partners. Share analysis and CAGR comparisons are provided

## **Global Vehicle Registrations**

Vehicle registrations by major regions and countries of the world

## **Global Economic and Automotive Data**

Global economic and automotive data including car and truck sales, GDP, population, roadways, U.S. imports and exports and vehicle registrations by country

## **U.S. Trade Data For Selected Motor Vehicle Products**

Detailed U.S. motor vehicle parts and accessories trade data for selected automotive products

## **Canadian Auto Care Industry**

Size of retail and wholesale Canadian auto care industry along with DIFM and DIY rates for selected industry products and data on the number of wholesale, retail and repair establishments. Also includes sales data for the top 10 passenger cars and light trucks

## **Mexican Auto Care Industry**

Data on the Mexican economy, top vehicles sold and production and export

## **Chinese Auto Care Industry**

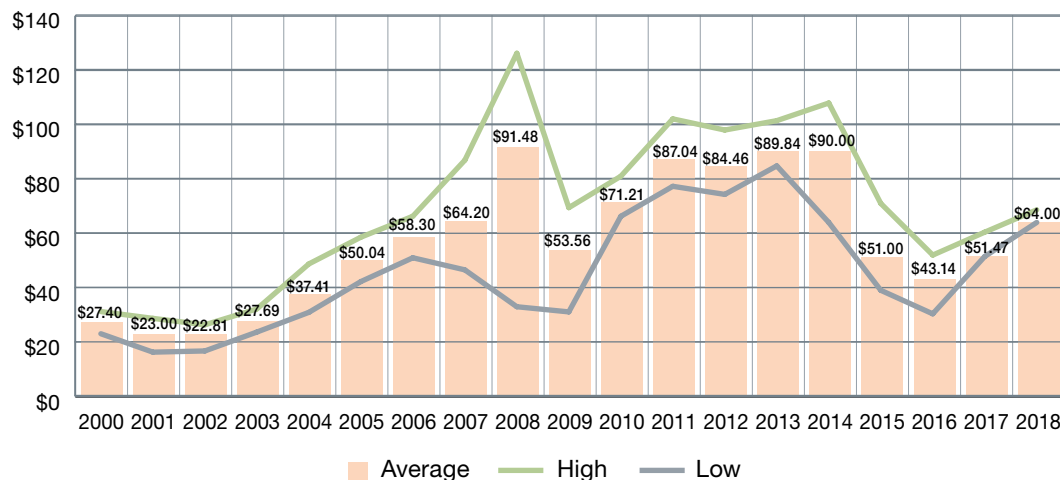
Data on the Chinese economy, vehicle registrations and the U.S. export and import market of automotive parts

# Aftermarket Dynamics

## 1. Annual Average price of West Texas Intermediate Crude (WTIC)

Global oil prices as measured by WTIC averaged well under \$20 a barrel during the 1990's. Increased global demand, inflation, and military conflict drove oil above \$140 a barrel in 2008. A slowing global economy, enhanced fuel efficiencies, and use of new technologies such as wind, solar, and especially hydraulic fracturing have increased the supply of electricity, oil and natural gas especially in the United States. With WTIC just below \$70 a barrel in April 2018, in the long run, higher oil prices seem a certainty. Oil prices reached a recent low of just over \$43 a barrel in 2016 and have increased more than 60 percent. Since this will present challenging dynamics for the U.S. motor vehicle aftermarket.

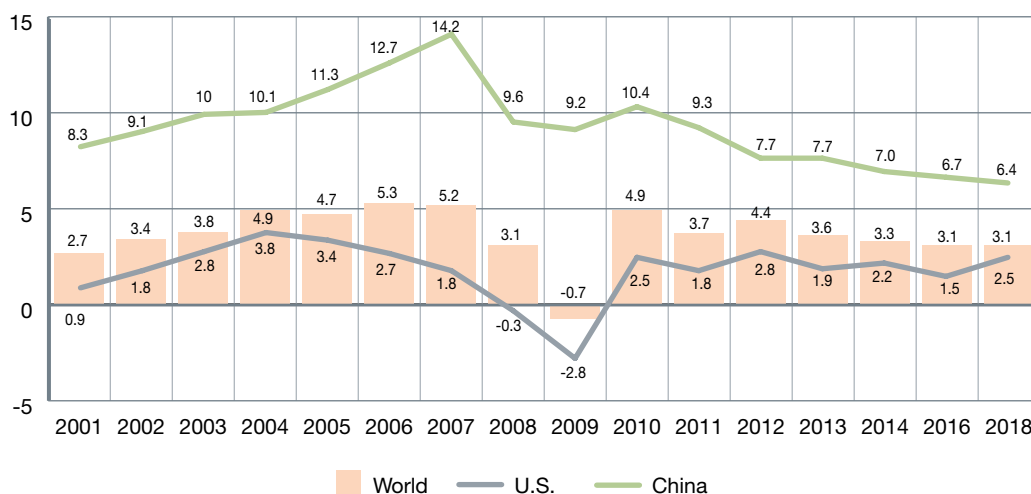
### Annual Average Price of WTIC (2000–2018)



## 2. Global GDP Growth

The U.S. economy has grown at a slower pace than the global average and certainly slower than China since 2000. The U.S. economy has grown at an average rate of 3.2 percent since the end of World War II, yet grew at roughly 1.9 percent since the U.S. economy began its recovery to the end of 2016. Many experts believe that an enlarged regulatory and tax burden over the last decade is responsible for slowing growth in the United States relative to much of the world. Tax and regulatory cuts in 2017 and 2018 have most experts seeing GDP growth in the US economy of at least 2.5 percent in 2018.

### Global GDP Growth (2001–2018)



Source: This summary was prepared by Dr. Timothy G. Nash, Senior Vice President and Director of the McNair Center for the Advancement of Free Enterprise and Entrepreneurship at Northwood University.

# Aftermarket Dynamics (Continued)

## 3. New Tax Changes tied to the PPACA

The Patient Protection and Affordable Care Act (PPACA), or “Obamacare”, continue to be debated for its efficiency and effectiveness. What many Americans do not realize is that there were numerous tax increases outlined in the act to pay for its implementation<sup>(1)</sup>. Per the chart above, the top Medicare tax rate went from 1.45 percent in 2013 to 2.35 percent in 2014. The top personal income tax bracket went from 35 percent to 39.6 percent as a result of the law with top income payroll tax rates, capital gains tax rates, dividend tax rates and estate tax rates all increasing dramatically as a result of the passage of the PPACA.

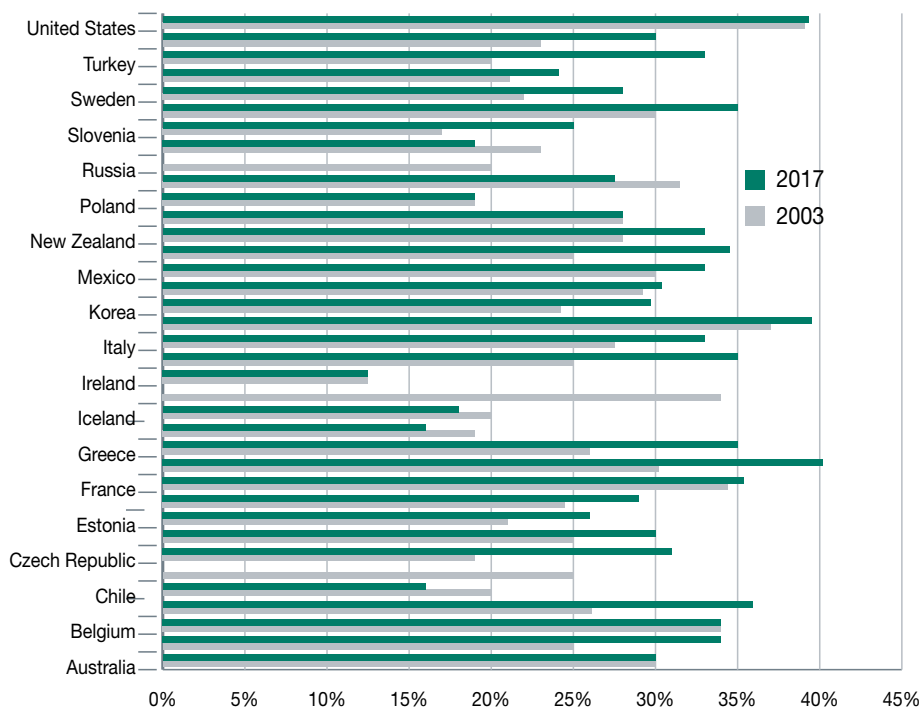
### New Tax Changes Tied to the PPACA

|                                 | Starting<br>January 2014 | 2013   |
|---------------------------------|--------------------------|--------|
| Top Medicare Tax Rate           | 2.35%                    | 1.45%  |
| Top Personal Income Tax Bracket | 39.60%                   | 35.00% |
| Top Income Payroll Tax Rate     | 52.40%                   | 37.40% |
| Capital Gains Tax Rate          | 28.00%                   | 15.00% |
| Dividend Tax Rate               | 39.60%                   | 15.00% |
| Estate Tax Rate                 | 55.00%                   | 0.00%  |

## 4. 2017 Average Corporate Tax Rates

Perhaps the most important debate that took place in Washington, D.C. in 2017, was the one surrounding U.S. competitiveness and tax reform. The United States remained the largest and most competitive economy in the world, but as depicted above it had a tremendous tax disadvantage relative to the rest of the world. Based on the above data provided by KPMG, one of the world's foremost international tax firms, U.S. businesses were at a competitive income tax disadvantage by region, globally, and certainly

### 2017 Corporate Tax Rates



as a country. According to KPMG, the U.S. at 40 percent, had the highest average corporate income tax rate in the industrialized world. Pro-business tax reform in the U.S. in 2017 will allow American businesses to compete, thrive, and grow in the ever-complex global economy. As a result of major tax reforms in 2017, the top U.S. Federal corporate income tax rate dropped from 35 percent in 2017 to 21 percent in 2018 making the United States highly competitive against most of the industrialized world.

Source: This summary was prepared by Dr. Timothy G. Nash, Senior Vice President and Director of the McNair Center for the Advancement of Free Enterprise and Entrepreneurship at Northwood University.

(1): Investor's Business Daily <https://www.investors.com/politics/editorials/supreme-court-confirms-obamacare-massive-tax-burden/>  
Forbes <https://www.forbes.com/sites/scottgottlieb/2014/02/27/the-obamacare-tax-that-nobody-expects/>

# U.S. Trade Data by Country

## The 20 Top U.S. Automotive Parts Export Markets, 2007-2017, NAICS 3363

(\$Million)

| COUNTRY              | RANK 2017 | 2007          | 2008          | 2009          | 2010          | 2011          | 2012          | 2013          | 2014          | 2015          | 2016          | 2017          | Share (%)     | 10-Yr CAGR 2007-2017 | % Change 2016-2017 |
|----------------------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------|--------------------|
| Canada               | 1         | 23,327        | 19,459        | 13,108        | 17,784        | 19,115        | 21,180        | 21,185        | 20,424        | 19,877        | 21,121        | 21,603        | 37.2%         | -0.8%                | 2.3%               |
| Mexico               | 2         | 7,518         | 8,108         | 8,412         | 11,549        | 15,084        | 17,169        | 18,020        | 18,399        | 20,848        | 19,777        | 19,809        | 34.1%         | 10.2%                | 0.2%               |
| China                | 3         | 937           | 717           | 768           | 904           | 1,193         | 1,290         | 1,791         | 2,116         | 1,990         | 2,455         | 2,976         | 5.1%          | 12.2%                | 21.2%              |
| Brazil               | 4         | 491           | 525           | 355           | 561           | 669           | 599           | 699           | 751           | 748           | 839           | 1,831         | 3.2%          | 14.1%                | 118.3%             |
| United Kingdom       | 5         | 539           | 588           | 331           | 530           | 658           | 665           | 626           | 974           | 1,172         | 1,159         | 1,270         | 2.2%          | 9.0%                 | 9.6%               |
| Germany              | 6         | 814           | 839           | 712           | 813           | 877           | 866           | 850           | 851           | 880           | 892           | 1,096         | 1.9%          | 3.0%                 | 22.9%              |
| Japan                | 7         | 1,250         | 1,131         | 546           | 906           | 953           | 947           | 808           | 914           | 987           | 965           | 1,018         | 1.8%          | -2.0%                | 5.5%               |
| Australia            | 8         | 537           | 495           | 362           | 581           | 767           | 1,099         | 811           | 799           | 760           | 693           | 740           | 1.3%          | 3.3%                 | 6.7%               |
| Italy                | 9         | 110           | 132           | 104           | 143           | 171           | 191           | 222           | 380           | 693           | 546           | 709           | 1.2%          | 20.5%                | 29.8%              |
| South Korea          | 10        | 361           | 305           | 207           | 358           | 645           | 539           | 607           | 620           | 657           | 725           | 644           | 1.1%          | 6.0%                 | -11.1%             |
| Thailand             | 11        | 99            | 101           | 70            | 100           | 109           | 224           | 266           | 223           | 254           | 426           | 479           | 0.8%          | 17.0%                | 12.5%              |
| United Arab Emirates | 12        | 118           | 169           | 157           | 192           | 215           | 330           | 335           | 435           | 402           | 366           | 375           | 0.6%          | 12.2%                | 2.3%               |
| India                | 13        | 81            | 105           | 83            | 158           | 204           | 234           | 150           | 156           | 168           | 172           | 316           | 0.5%          | 14.6%                | 83.9%              |
| Belgium              | 14        | 289           | 281           | 210           | 311           | 402           | 369           | 278           | 320           | 354           | 322           | 313           | 0.5%          | 0.8%                 | -2.8%              |
| South Africa         | 15        | 139           | 171           | 103           | 137           | 178           | 175           | 169           | 180           | 231           | 220           | 295           | 0.5%          | 7.8%                 | 34.1%              |
| Argentina            | 16        | 199           | 180           | 101           | 69            | 105           | 75            | 111           | 179           | 183           | 239           | 267           | 0.5%          | 3.0%                 | 11.5%              |
| Singapore            | 17        | 159           | 225           | 160           | 220           | 279           | 296           | 258           | 245           | 210           | 205           | 251           | 0.4%          | 4.7%                 | 22.4%              |
| Russian Federation   | 18        | 109           | 125           | 34            | 50            | 125           | 181           | 227           | 299           | 194           | 185           | 249           | 0.4%          | 8.6%                 | 34.6%              |
| France               | 19        | 474           | 417           | 293           | 393           | 322           | 275           | 304           | 324           | 288           | 256           | 245           | 0.4%          | -6.4%                | -4.5%              |
| Spain                | 20        | 183           | 149           | 81            | 109           | 112           | 127           | 200           | 235           | 336           | 268           | 222           | 0.4%          | 1.9%                 | -17.2%             |
| Rest of World        |           | 3,139         | 3,183         | 2,450         | 2,821         | 3,321         | 3,472         | 3,434         | 3,630         | 3,498         | 3,214         | 3,358         | 5.8%          | 0.7%                 | 4.5%               |
| <b>World</b>         |           | <b>40,873</b> | <b>37,403</b> | <b>28,646</b> | <b>38,691</b> | <b>45,504</b> | <b>50,304</b> | <b>51,352</b> | <b>52,455</b> | <b>54,727</b> | <b>55,047</b> | <b>58,066</b> | <b>100.0%</b> | <b>3.6%</b>          | <b>5.5%</b>        |

Note: Exports are Total Exports (Domestic+Foreign), FAS Value

Source: United States Department of Commerce, Bureau of the Census, Foreign Trade Division, TPIS DATABASE: USHS

## The 20 Top U.S. Automotive Parts Import Markets, 2007-2017, NAICS 3363

(\$Million)

| COUNTRY        | RANK 2017 | 2007          | 2008          | 2009          | 2010          | 2011          | 2012          | 2013           | 2014           | 2015           | 2016           | 2017           | Share (%)     | 10-Yr CAGR 2007-2017 | % Change 2016-2017 |
|----------------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------------|--------------------|
| Mexico         | 1         | 22,641        | 20,653        | 15,475        | 23,501        | 28,402        | 33,092        | 35,959         | 40,331         | 43,883         | 46,042         | 45,542         | 39.9%         | 7.2%                 | -1.1%              |
| China          | 2         | 5,185         | 5,255         | 4,432         | 6,577         | 8,097         | 9,194         | 10,168         | 11,925         | 13,288         | 13,117         | 13,533         | 11.9%         | 10.1%                | 3.2%               |
| Canada         | 3         | 16,980        | 13,310        | 8,224         | 11,873        | 12,650        | 13,665        | 13,342         | 14,664         | 14,399         | 13,790         | 13,223         | 11.6%         | -2.5%                | -4.1%              |
| Japan          | 4         | 12,494        | 11,322        | 7,771         | 10,756        | 12,089        | 15,277        | 13,343         | 13,070         | 11,816         | 12,038         | 12,556         | 11.0%         | 0.0%                 | 4.3%               |
| Germany        | 5         | 6,080         | 5,633         | 3,894         | 5,020         | 6,155         | 7,182         | 7,408          | 8,179          | 8,689          | 7,835          | 7,491          | 6.6%          | 2.1%                 | -4.4%              |
| South Korea    | 6         | 2,934         | 2,844         | 1,857         | 3,542         | 4,562         | 5,558         | 5,920          | 6,396          | 6,450          | 6,452          | 5,751          | 5.0%          | 7.0%                 | -10.9%             |
| Taiwan         | 7         | 1,663         | 1,675         | 1,471         | 1,712         | 1,935         | 2,098         | 2,156          | 2,341          | 2,482          | 2,362          | 2,495          | 2.2%          | 4.1%                 | 5.6%               |
| United Kingdom | 8         | 962           | 856           | 609           | 768           | 899           | 1,185         | 1,347          | 1,572          | 1,418          | 1,323          | 1,416          | 1.2%          | 3.9%                 | 7.0%               |
| India          | 9         | 518           | 567           | 416           | 687           | 830           | 909           | 780            | 1,004          | 1,149          | 1,035          | 1,173          | 1.0%          | 8.5%                 | 13.3%              |
| Thailand       | 10        | 549           | 562           | 385           | 561           | 659           | 672           | 625            | 656            | 834            | 924            | 835            | 0.7%          | 4.3%                 | -9.7%              |
| Italy          | 11        | 605           | 668           | 466           | 526           | 612           | 669           | 606            | 734            | 737            | 730            | 713            | 0.6%          | 1.7%                 | -2.3%              |
| Vietnam        | 12        | 100           | 144           | 137           | 211           | 264           | 436           | 497            | 532            | 554            | 590            | 707            | 0.6%          | 21.6%                | 19.8%              |
| Austria        | 13        | 513           | 378           | 448           | 740           | 1,541         | 950           | 837            | 1,015          | 922            | 622            | 693            | 0.6%          | 3.1%                 | 11.5%              |
| Philippines    | 14        | 500           | 479           | 324           | 407           | 411           | 471           | 501            | 584            | 715            | 639            | 671            | 0.6%          | 3.0%                 | 5.0%               |
| France         | 15        | 1,023         | 906           | 682           | 837           | 887           | 632           | 678            | 723            | 688            | 680            | 656            | 0.6%          | -4.3%                | -3.6%              |
| Spain          | 16        | 310           | 230           | 155           | 163           | 292           | 587           | 660            | 806            | 811            | 585            | 650            | 0.6%          | 7.7%                 | 11.2%              |
| Czech Republic | 17        | 217           | 231           | 204           | 317           | 387           | 437           | 441            | 522            | 594            | 577            | 592            | 0.5%          | 10.6%                | 2.6%               |
| Honduras       | 18        | 395           | 338           | 275           | 400           | 498           | 577           | 651            | 595            | 633            | 586            | 570            | 0.5%          | 3.7%                 | -2.6%              |
| Brazil         | 19        | 983           | 850           | 491           | 625           | 752           | 725           | 574            | 546            | 521            | 489            | 527            | 0.5%          | -6.1%                | 7.7%               |
| Nicaragua      | 20        | 166           | 190           | 160           | 274           | 350           | 402           | 482            | 480            | 493            | 569            | 522            | 0.5%          | 12.2%                | -8.1%              |
| Rest of World  |           | 2,517         | 2,287         | 1,551         | 2,183         | 2,753         | 3,090         | 3,076          | 3,758          | 3,924          | 3,730          | 3,681          | 3.2%          | 3.9%                 | -1.3%              |
| <b>World</b>   |           | <b>77,333</b> | <b>69,376</b> | <b>49,428</b> | <b>71,679</b> | <b>85,023</b> | <b>97,807</b> | <b>100,053</b> | <b>110,432</b> | <b>115,001</b> | <b>114,715</b> | <b>113,998</b> | <b>100.0%</b> | <b>4.0%</b>          | <b>-0.6%</b>       |

Note: Imports are General Imports, Customs Value

Source: United States Department of Commerce, Bureau of the Census, Foreign Trade Division, TPIS DATABASE: USHS



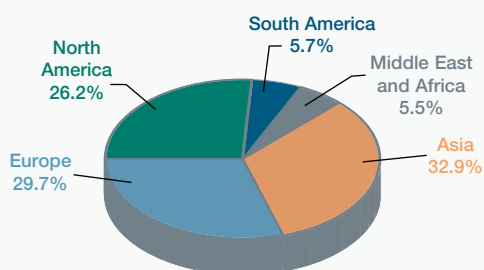
# Global Vehicle Registrations by Country

Global vehicle registrations surpassed the 1 billion unit mark in 2017 for the sixth consecutive year. Worldwide registrations of cars, light, medium and heavy duty trucks increased by 4.2 percent from 1.28 billion in 2016 to 1.33 billion in 2017. Asia had the highest number of registered vehicles, accounting for 32.9 percent of the global fleet; followed by Europe's 29.7 percent, North America's 26.2 percent, South America's 5.7 percent and 5.5 percent in the Middle East and Africa. The top vehicle-owning nations included the U.S., with 280.6 million vehicles, China (184.5 million vehicles), Japan (77.7 million vehicles) and Russia (49.7 million vehicles).

The U.S. and New Zealand recorded the lowest number of persons per car ratio with 1.2, respectively. Canada is second with 1.3 persons per car. By contrast, China, the most populous nation in the world with 1.4 billion of the world's 7.4 billion people, has 184.5 million vehicles equating to 7.5 persons per car.

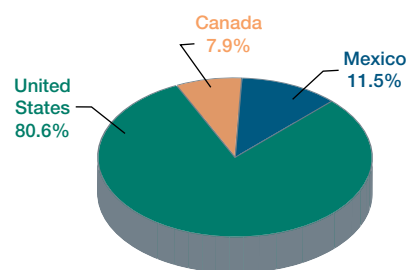
## Global Registrations by Region

Total = 1,329,245,675 (4.2%: 2016 v. 2017)



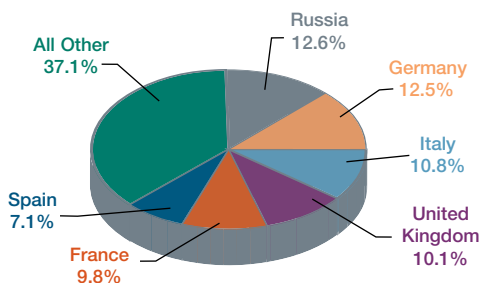
## North American Registrations

Total = 348,201,445 (26.2% of Global)



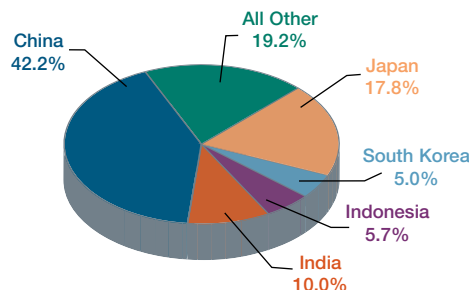
## European Registrations

Total = 395,399,415 (29.7% of Global)



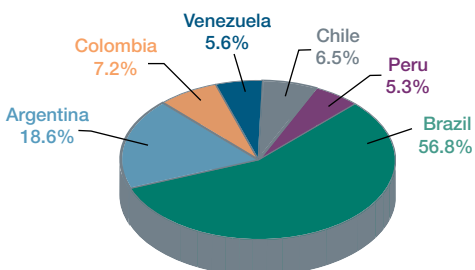
## Asian Registrations

Total = 436,810,056 (32.9% of Global)



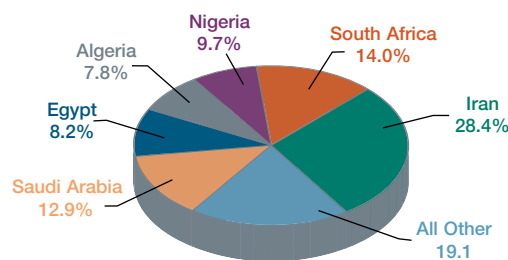
## South American Registrations

Total = 75,872,187 (5.7% of Global)



## Middle East and African Registrations

Total = 72,962,572 (5.5% of Global)



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# Global Economic and Automotive Data 2017

| Region/Country | Population;<br>2017 Est.<br>(in millions) | Population<br>Growth Rate | Labor Force<br>(millions) | Labor Force<br>% of Pop | Unemployment<br>Rate | GDP/<br>Capita (PPP) | GDP (PPP)<br>(in billions) | GDP<br>(Real Growth<br>Rate) |
|----------------|---|---------------------------|---------------------------|-------------------------|----------------------|----------------------|----------------------------|------------------------------|
| EUROPE         |   |                           |                           |                         |                      |                      |                            |                              |
| Austria        | 8.75                                      | 0.5%                      | 4.00                      | 45.7%                   | 5.4%                 | \$49,200             | \$434.1                    | 2.3%                         |
| Belarus        | 9.55                                      | -0.2%                     | 4.38                      | 45.9%                   | 1.0%                 | \$18,600             | \$175.9                    | 0.7%                         |
| Belgium        | 11.49                                     | 0.7%                      | 5.32                      | 46.3%                   | 7.5%                 | \$46,300             | \$526.4                    | 1.6%                         |
| Bulgaria       | 7.10                                      | -0.6%                     | 2.58                      | 36.3%                   | 6.6%                 | \$21,600             | \$152.4                    | 3.6%                         |
| Croatia        | 4.29                                      | -0.5%                     | 1.55                      | 36.2%                   | 13.9%                | \$24,100             | \$100.2                    | 2.9%                         |
| Czech Republic | 10.67                                     | 0.1%                      | 5.43                      | 50.8%                   | 2.8%                 | \$35,200             | \$372.6                    | 3.5%                         |
| Denmark        | 5.61                                      | 0.2%                      | 3.00                      | 53.5%                   | 5.8%                 | \$49,600             | \$285.5                    | 1.9%                         |
| Estonia        | 1.25                                      | -0.6%                     | 0.67                      | 53.5%                   | 8.4%                 | \$31,500             | \$41.2                     | 4.0%                         |
| Finland        | 5.52                                      | 0.4%                      | 2.70                      | 48.8%                   | 8.7%                 | \$44,000             | \$242.4                    | 2.8%                         |
| France         | 62.81                                     | 0.4%                      | 30.68                     | 48.8%                   | 9.5%                 | \$43,600             | \$2,826.0                  | 1.6%                         |
| Germany        | 80.59                                     | -0.2%                     | 45.90                     | 57.0%                   | 3.8%                 | \$50,200             | \$4,150.0                  | 2.1%                         |
| Greece         | 10.77                                     | -0.1%                     | 4.77                      | 44.3%                   | 22.3%                | \$27,800             | \$299.5                    | 1.8%                         |
| Hungary        | 9.85                                      | -0.3%                     | 4.60                      | 46.7%                   | 4.4%                 | \$28,900             | \$283.6                    | 3.2%                         |
| Ireland        | 5.01                                      | 1.2%                      | 2.23                      | 44.4%                   | 4.4%                 | \$72,600             | \$344.8                    | 4.1%                         |
| Italy          | 62.14                                     | 0.2%                      | 25.94                     | 41.7%                   | 11.4%                | \$38,000             | \$2,307.0                  | 1.5%                         |
| Latvia         | 1.94                                      | -1.1%                     | 0.99                      | 50.9%                   | 9.0%                 | \$27,300             | \$53.5                     | 3.8%                         |
| Lithuania      | 2.82                                      | -1.1%                     | 1.47                      | 52.0%                   | 7.0%                 | \$31,900             | \$90.6                     | 3.5%                         |
| Netherlands    | 17.08                                     | 0.4%                      | 7.97                      | 46.6%                   | 5.1%                 | \$53,600             | \$915.2                    | 3.1%                         |
| Norway         | 5.32                                      | 1.0%                      | 2.80                      | 52.6%                   | 4.0%                 | \$70,600             | \$375.9                    | 1.4%                         |
| Poland         | 38.48                                     | -0.1%                     | 17.60                     | 45.7%                   | 4.8%                 | \$29,300             | \$1,111.0                  | 3.8%                         |
| Portugal       | 10.84                                     | 0.0%                      | 5.23                      | 48.3%                   | 9.7%                 | \$30,300             | \$211.70                   | 2.5%                         |
| Romania        | 21.53                                     | -0.3%                     | 8.95                      | 41.6%                   | 5.3%                 | \$24,000             | \$474.0                    | 5.5%                         |
| Russia         | 142.26                                    | -0.1%                     | 76.53                     | 53.8%                   | 5.5%                 | \$27,900             | \$4,000.0                  | 1.8%                         |
| Slovakia       | 5.45                                      | 0.0%                      | 2.76                      | 50.6%                   | 8.1%                 | \$32,900             | \$178.7                    | 3.3%                         |
| Slovenia       | 1.97                                      | -0.3%                     | 0.93                      | 47.2%                   | 6.8%                 | \$34,100             | \$70.4                     | 4.0%                         |
| Spain          | 48.96                                     | 0.8%                      | 22.75                     | 46.5%                   | 17.1%                | \$38,200             | \$1,769.0                  | 3.1%                         |
| Sweden         | 9.96                                      | 0.8%                      | 5.36                      | 53.8%                   | 6.6%                 | \$51,300             | \$521.7                    | 3.1%                         |
| Switzerland    | 8.24                                      | 0.7%                      | 5.16                      | 62.6%                   | 3.0%                 | \$51,300             | \$516.7                    | 1.0%                         |
| Turkey         | 80.85                                     | 0.5%                      | 31.30                     | 38.7%                   | 11.2%                | \$26,500             | \$2,133.0                  | 5.1%                         |
| Ukraine        | 44.03                                     | -0.4%                     | 17.99                     | 40.9%                   | 9.5%                 | \$8,700              | \$366.4                    | 2.0%                         |
| United Kingdom | 64.77                                     | 0.5%                      | 33.50                     | 51.7%                   | 4.4%                 | \$43,600             | \$2,880.0                  | 1.7%                         |

| Region/Country     | Population;<br>2017 Est.<br>(in millions) | Population<br>Growth Rate | Labor Force<br>(millions) | Labor Force<br>% of Pop | Unemployment<br>Rate | GDP/<br>Capita (PPP) | GDP (PPP)<br>(in billions) | GDP<br>(Real Growth<br>Rate) |
|--------------------|---|---------------------------|---------------------------|-------------------------|----------------------|----------------------|----------------------------|------------------------------|
| ASIA & PACIFIC RIM |   |                           |                           |                         |                      |                      |                            |                              |
| Afghanistan        | 34.12                                     | 2.4%                      | 7.98                      | 23.4%                   | 35.0%                | \$1,900              | \$69.5                     | 2.5%                         |
| Australia          | 23.23                                     | 1.0%                      | 12.91                     | 55.6%                   | 5.6%                 | \$49,900             | \$1,235.0                  | 2.2%                         |
| Bangladesh         | 157.83                                    | 1.0%                      | 73.41                     | 46.5%                   | 4.1%                 | \$4,200              | \$686.5                    | 7.1%                         |
| China              | 1,379.30                                  | 0.4%                      | 806.70                    | 58.5%                   | 4.0%                 | \$16,600             | \$23,120.0                 | 6.8%                         |
| Hong Kong          | 7.19                                      | 0.3%                      | 3.97                      | 55.1%                   | 2.6%                 | \$61,000             | \$453.0                    | 3.5%                         |
| India              | 1,281.94                                  | 1.2%                      | 521.90                    | 40.7%                   | 8.8%                 | \$7,200              | \$9,447.0                  | 6.7%                         |
| Indonesia          | 260.58                                    | 0.9%                      | 126.10                    | 48.4%                   | 5.4%                 | \$12,400             | \$3.2                      | 5.2%                         |
| Japan              | 126.45                                    | -0.2%                     | 67.77                     | 53.6%                   | 2.9%                 | \$42,700             | \$5,405.0                  | 1.5%                         |
| Korea, North       | 25.25                                     | 0.5%                      | 14.00                     | 55.4%                   | 25.6%                | \$1,700              | \$40.0                     | -1.1%                        |
| Korea, South       | 51.18                                     | 0.5%                      | 27.47                     | 53.7%                   | 3.8%                 | \$39,400             | \$2,027.0                  | 3.0%                         |
| Malaysia           | 31.38                                     | 1.4%                      | 14.94                     | 47.6%                   | 3.4%                 | \$28,900             | \$926.1                    | 5.4%                         |
| New Zealand        | 4.51                                      | 0.8%                      | 2.66                      | 58.9%                   | 4.9%                 | \$38,500             | \$185.7                    | 3.5%                         |
| Pakistan           | 204.92                                    | 1.4%                      | 63.89                     | 31.2%                   | 6.0%                 | \$5,400              | \$1,056.0                  | 5.3%                         |
| Philippines        | 104.26                                    | 1.6%                      | 44.46                     | 42.6%                   | 6.0%                 | \$8,200              | \$874.5                    | 6.6%                         |
| Singapore          | 5.89                                      | 1.8%                      | 3.67                      | 62.3%                   | 2.2%                 | \$90,500             | \$513.7                    | 2.5%                         |
| Taiwan             | 23.51                                     | 0.2%                      | 11.78                     | 50.1%                   | 3.8%                 | \$49,800             | \$1,175.0                  | 2.0%                         |
| Thailand           | 68.41                                     | 0.3%                      | 38.37                     | 56.1%                   | 0.7%                 | \$17,800             | \$1,229.0                  | 3.7%                         |
| Uzbekistan         | 29.75                                     | 0.9%                      | 18.12                     | 60.9%                   | 4.9%                 | \$7,000              | \$221.7                    | 6.0%                         |
| Vietnam            | 96.16                                     | 0.9%                      | 56.46                     | 58.7%                   | 2.3%                 | \$6,900              | \$643.9                    | 6.3%                         |

# Global Economic and Automotive Data 2017

| Region/Country | Inflation Rate<br>(Consumer<br>Prices) | Total<br>Roadways<br>(in km) | Total Vehicle<br>Registrations | Persons<br>Per Car | Parts Import<br>\$\$\$<br>('000s) <sup>1</sup> | Parts Export<br>\$\$\$<br>('000s) <sup>1</sup> | 2017<br>New Car<br>Registrations | 2017<br>New Truck<br>Registrations |
|----------------|--|------------------------------|--------------------------------|--------------------|--|--|----------------------------------|------------------------------------|
| EUROPE         |  |                              |                                |                    |  |  |                                  |                                    |
| Austria        | 1.6%                                   | 138,696                      | 5,359,480                      | 1.6                | 292,938  | 49,280   | 353,320                          | 47,830                             |
| Belarus        | 8.0%                                   | 86,392                       | 3,525,827                      | 2.7                | 54   | 1,213  | 32,127                           | 10,495                             |
| Belgium        | 2.2%                                   | 154,012                      | 6,590,170                      | 1.7                | 91,850   | 242,116  | 546,558                          | 85,905                             |
| Bulgaria       | 1.1%                                   | 19,512                       | 3,587,958                      | 2.0                | 11,271   | 1,254  | 34,780                           | 6,217                              |
| Croatia        | 1.1%                                   | 26,958                       | 1,724,267                      | 2.5                | 3,475  | 693  | 52,049                           | 7,632                              |
| Czech Republic | 2.3%                                   | 130,661                      | 6,084,751                      | 1.8                | 473,773  | 27,882   | 271,595                          | 27,953                             |
| Denmark        | 1.0%                                   | 74,558                       | 2,928,531                      | 1.9                | 20,475   | 24,328   | 222,150                          | 39,190                             |
| Estonia        | 3.8%                                   | 58,412                       | 816,206                        | 1.5                | 10,036   | 1,910  | 25,618                           | 5,477                              |
| Finland        | 0.8%                                   | 454,000                      | 3,024,558                      | 1.8                | 57,244   | 20,971   | 118,652                          | 18,765                             |
| France         | 1.2%                                   | 1,028,446                    | 38,865,854                     | 1.6                | 607,207  | 207,195  | 2,106,308                        | 480,390                            |
| Germany        | 1.6%                                   | 645,000                      | 49,286,272                     | 1.6                | 4,339,705                                      | 901,442  | 3,441,261                        | 336,176                            |
| Greece         | 1.2%                                   | 116,960                      | 6,244,907                      | 1.7                | 7,149  | 2,554  | 88,079                           | 7,314                              |
| Hungary        | 2.5%                                   | 203,601                      | 3,821,432                      | 2.6                | 350,759  | 113,521  | 116,267                          | 22,666                             |
| Ireland        | 0.4%                                   | 96,036                       | 2,466,518                      | 2.0                | 19,980   | 14,621   | 131,332                          | 25,825                             |
| Italy          | 1.4%                                   | 487,700                      | 42,859,752                     | 1.4                | 662,801  | 437,547  | 1,976,602                        | 196,216                            |
| Latvia         | 3.0%                                   | 72,440                       | 751,477                        | 2.6                | 3,002  | 4,499  | 16,698                           | 3,584                              |
| Lithuania      | 3.5%                                   | 84,166                       | 1,295,630                      | 2.2                | 3,007  | 6,916  | 25,836                           | 5,658                              |
| Netherlands    | 1.3%                                   | 139,124                      | 9,345,691                      | 1.8                | 112,584  | 167,665  | 418,065                          | 82,142                             |
| Norway         | 2.1%                                   | 93,870                       | 3,225,262                      | 1.6                | 14,757   | 18,708   | 158,650                          | 42,130                             |
| Poland         | 1.9%                                   | 417,026                      | 25,444,449                     | 1.5                | 345,019  | 149,682  | 484,364                          | 81,881                             |
| Portugal       | 1.6%                                   | 82,900                       | 7,986,648                      | 1.4                | 49,918   | 7,865  | 222,107                          | 42,488                             |
| Romania        | 1.1%                                   | 84,185                       | 6,469,985                      | 3.3                | 132,049  | 19,894   | 105,193                          | 26,341                             |
| Russia         | 4.2%                                   | 1,283,387                    | 49,695,059                     | 2.9                | 5,702  | 182,180  | 1,475,398                        | 191,412                            |
| Slovakia       | 1.2%                                   | 54,869                       | 2,461,630                      | 2.2                | 112,433  | 25,227   | 96,085                           | 12,583                             |
| Slovenia       | 1.6%                                   | 38,985                       | 1,270,067                      | 1.6                | 57,929   | 638  | 73,318                           | 10,724                             |
| Spain          | 2.0%                                   | 683,175                      | 27,949,786                     | 1.8                | 628,678  | 200,371  | 1,234,931                        | 218,753                            |
| Sweden         | 1.6%                                   | 573,134                      | 5,355,483                      | 1.9                | 159,003  | 54,660   | 379,393                          | 61,677                             |
| Switzerland    | 0.5%                                   | 71,464                       | 4,996,211                      | 1.6                | 54,825   | 12,804   | 314,039                          | 40,842                             |
| Turkey         | 10.9%                                  | 385,754                      | 16,270,109                     | 5.0                | 376,916  | 147,773  | 722,759                          | 259,712                            |
| Ukraine        | 12.8%                                  | 169,694                      | 15,597,836                     | 2.8                | 7,810  | 7,381  | 80,708                           | 10,325                             |
| United Kingdom | 2.6%                                   | 394,428                      | 40,097,609                     | 1.6                | 1,419,688                                      | 1,132,508                                      | 2,540,617                        | 395,785                            |

| Region/Country     | Inflation Rate<br>(Consumer<br>Prices) | Total<br>Roadways<br>(in km) | Total Vehicle<br>Registrations | Persons<br>Per Car | Parts Import<br>\$\$\$<br>('000s) <sup>1</sup> | Parts Export<br>\$\$\$<br>('000s) <sup>1</sup> | 2017<br>New Car<br>Registrations | 2017<br>New Truck<br>Registrations |
|--------------------|--|------------------------------|--------------------------------|--------------------|--|--|----------------------------------|------------------------------------|
| ASIA & PACIFIC RIM |  |                              |                                |                    |  |  |                                  |                                    |
| Afghanistan        | 6.0%                                   | 42,150                       | 9,021,234                      | 3.8                | 92   | 14,776   |                                  |                                    |
| Australia          | 2.0%                                   | 823,217                      | 17,049,573                     | 1.4                | 123,784  | 642,153  | 915,658                          | 265,138                            |
| Bangladesh         | 5.7%                                   | 21,269                       | 1,642,862                      | 96.1               | 84   | 2,211  | n/a                              | n/a                                |
| China              | 1.8%                                   | 4,577,300                    | 184,518,966                    | 7.5                | 13,262,399                                     | 2,741,573                                      | 24,511,423                       | 4,091,095                          |
| Hong Kong          | 2.0%                                   | 2,100                        | 681,995                        | 10.5               | 38,986   | 116,940  | 38,032                           | 6,073                              |
| India              | 3.8%                                   | 4,699,024                    | 43,755,120                     | 29.3               | 1,164,317                                      | 288,143  | 3,260,277                        | 577,369                            |
| Indonesia          | 4.0%                                   | 496,607                      | 25,057,894                     | 10.4               | 243,650  | 31,948   | 841,158                          | 294,917                            |
| Japan              | 0.4%                                   | 1,218,772                    | 77,678,717                     | 1.6                | 10,925,536                                     | 922,790  | 4,381,900                        | 827,371                            |
| Korea, North       | n/a                                    | 25,554                       | n/a                            | 91.2               | n/a  | n/a  | n/a                              | n/a                                |
| Korea, South       | 1.9%                                   | 99,025                       | 21,717,752                     | 2.4                | 5,692,983                                      | 591,140  | 1,481,008                        | 306,855                            |
| Malaysia           | 3.8%                                   | 144,403                      | 12,710,000                     | 2.5                | 175,132  | 46,424   | 478,266                          | 64,610                             |
| New Zealand        | 2.2%                                   | 94,902                       | 3,899,015                      | 1.2                | 8,031  | 31,207   | 108,608                          | 50,174                             |
| Pakistan           | 4.1%                                   | 263,942                      | 3,325,128                      | 61.6               | 1,975  | 9,440  | 203,312                          | 47,590                             |
| Philippines        | 3.1%                                   | 216,387                      | 4,931,790                      | 21.1               | 664,895  | 41,510   | 374,345                          | 182,736                            |
| Singapore          | 0.90%                                  | 3,425                        | 783,338                        | 7.5                | 49,997   | 213,378  | 91,918                           | 15,056                             |
| Taiwan             | 1.0%                                   | 42,520                       | 7,842,122                      | 3.0                | 2,474,913                                      | 44,939   | 333,480                          | 95,592                             |
| Thailand           | 0.6%                                   | 180,053                      | 16,714,789                     | 4.1                | 860,248  | 424,141  | 485,243                          | 387,726                            |
| Uzbekistan         | 13.0%                                  | 86,496                       | 3,763,137                      | 7.9                | 22   | 230  | 121,255                          | 27,508                             |
| Vietnam            | 4.4%                                   | 195,468                      | 1,716,624                      | 56.0               | 681,972  | 14,386   | 157,409                          | 81,031                             |

# Global Economic and Automotive Data 2017

| Region/Country       | Population;<br>2017 Est.<br>(in millions) | Population<br>Growth Rate | Labor Force<br>(millions) | Labor Force<br>% of Pop | Unemployment<br>Rate | GDP/<br>Capita (PPP) | GDP (PPP)<br>(in billions) | GDP<br>(Real Growth<br>Rate) |
|----------------------|---|---------------------------|---------------------------|-------------------------|----------------------|----------------------|----------------------------|------------------------------|
| <b>NORTH AMERICA</b> |   |                           |                           |                         |                      |                      |                            |                              |
| Canada               | 35.62                                     | 0.7%                      | 19.52                     | 54.8%                   | 6.5%                 | \$48,100             | \$1,764.0                  | 3.0%                         |
| Mexico               | 124.57                                    | 1.1%                      | 54.51                     | 43.8%                   | 3.6%                 | \$19,500             | \$2,406.0                  | 2.1%                         |
| United States        | 326.63                                    | 0.8%                      | 160.40                    | 49.1%                   | 4.4%                 | \$59,500             | \$19,360.0                 | 2.2%                         |

| Region/Country       | Population;<br>2017 Est.<br>(in millions) | Population<br>Growth Rate | Labor Force<br>(millions) | Labor Force<br>% of Pop | Unemployment<br>Rate | GDP/<br>Capita (PPP) | GDP (PPP)<br>(in billions) | GDP<br>(Real Growth<br>Rate) |
|----------------------|---|---------------------------|---------------------------|-------------------------|----------------------|----------------------|----------------------------|------------------------------|
| <b>SOUTH AMERICA</b> |   |                           |                           |                         |                      |                      |                            |                              |
| Argentina            | 44.29                                     | 0.9%                      | 18.00                     | 40.6%                   | 8.1%                 | \$20,700             | \$911.5                    | 2.5%                         |
| Brazil               | 207.35                                    | 0.7%                      | 111.60                    | 53.8%                   | 13.1%                | \$15,500             | \$3,219.0                  | 0.7%                         |
| Chile                | 17.79                                     | 0.8%                      | 8.88                      | 49.9%                   | 7.0%                 | \$24,600             | \$452.1                    | 1.4%                         |
| Colombia             | 47.70                                     | 1.0%                      | 24.67                     | 51.7%                   | 9.3%                 | \$14,500             | \$712.5                    | 1.7%                         |
| Peru                 | 31.04                                     | 1.0%                      | 17.03                     | 54.9%                   | 6.7%                 | \$13,300             | \$424.6                    | 2.7%                         |
| Venezuela            | 31.30                                     | 1.2%                      | 14.21                     | 45.4%                   | 26.4%                | \$12,400             | \$389.4                    | -12.0%                       |

| Region/Country                  | Population;<br>2017 Est.<br>(in millions) | Population<br>Growth Rate | Labor Force<br>(millions) | Labor Force<br>% of Pop | Unemployment<br>Rate | GDP/<br>Capita (PPP) | GDP (PPP)<br>(in billions) | GDP<br>(Real Growth<br>Rate) |
|---------------------------------|---|---------------------------|---------------------------|-------------------------|----------------------|----------------------|----------------------------|------------------------------|
| <b>MIDDLE EAST &amp; AFRICA</b> |   |                           |                           |                         |                      |                      |                            |                              |
| Algeria                         | 40.97                                     | 1.7%                      | 11.82                     | 28.9%                   | 11.7%                | \$15,100             | \$629.3                    | 1.5%                         |
| D.R. of Congo                   | 83.30                                     | 2.4%                      | 31.36                     | 37.6%                   | n/a                  | \$800                | \$68.0                     | 2.8%                         |
| Egypt                           | 97.04                                     | 2.5%                      | 29.95                     | 30.9%                   | 12.2%                | \$13,000             | \$1,199.0                  | 4.1%                         |
| Ghana                           | 27.50                                     | 2.2%                      | 12.49                     | 45.4%                   | 11.9%                | \$4,600              | \$130.2                    | 5.9%                         |
| Iran                            | 82.02                                     | 1.2%                      | 30.50                     | 37.2%                   | 12.4%                | \$20,000             | \$1,631.0                  | 3.5%                         |
| Iraq                            | 39.19                                     | 2.6%                      | 8.90                      | 22.7%                   | 16.0%                | \$17,000             | \$660.7                    | -0.4%                        |
| Israel                          | 8.30                                      | 1.5%                      | 4.02                      | 48.4%                   | 4.3%                 | \$36,200             | \$315.6                    | 3.1%                         |
| Jordan                          | 10.25                                     | 2.1%                      | 2.30                      | 22.4%                   | 16.5%                | \$12,500             | \$89.1                     | 2.3%                         |
| Kenya                           | 47.62                                     | 1.7%                      | 19.82                     | 41.6%                   | 40.0%                | \$3,500              | \$163.4                    | 5.0%                         |
| Libya                           | 6.65                                      | 1.6%                      | 1.11                      | 16.7%                   | 30.0%                | \$9,800              | \$63.14                    | 55.1%                        |
| Nigeria                         | 190.63                                    | 2.4%                      | 60.08                     | 31.5%                   | 13.4%                | \$5,900              | \$1,118.0                  | 0.8%                         |
| Qatar                           | 2.31                                      | 2.3%                      | 1.95                      | 84.4%                   | 0.6%                 | \$124,900            | \$341.7                    | 2.5%                         |
| Saudi Arabia                    | 28.57                                     | 1.5%                      | 12.34                     | 43.2%                   | 5.6%                 | \$55,300             | \$1,789.0                  | 0.1%                         |
| South Africa                    | 54.84                                     | 1.0%                      | 22.19                     | 40.5%                   | 27.6%                | \$13,400             | \$757.3                    | 0.7%                         |
| Syria                           | 18.03                                     | n/a                       | 3.77                      | 20.9%                   | 50.0%                | \$2,900              | \$50.3                     | n/a                          |

# Global Economic and Automotive Data 2017

| Region/Country       | Inflation Rate<br>(Consumer Prices) | Total Roadways<br>(in km) | Total Vehicle Registrations | Persons Per Car | Parts Import<br>\$\$\$ ('000s)*1 | Parts Export<br>\$\$\$ ('000s)*1 | 2017 New Car Registrations | 2017 New Truck Registrations |
|----------------------|-------------------------------------|---------------------------|-----------------------------|-----------------|----------------------------------|----------------------------------|----------------------------|------------------------------|
| <b>NORTH AMERICA</b> |                                     |                           |                             |                 |                                  |                                  |                            |                              |
| Canada               | 1.6%                                | 1,042,300                 | 27,494,898                  | 1.3             | 13,170,416                       | 18,952,392                       | 673,819                    | 1,415,397                    |
| Mexico               | 5.9%                                | 377,660                   | 40,122,386                  | 3.1             | 45,048,722                       | 16,015,827                       | 976,727                    | 608,690                      |
| United States        | 2.1%                                | 6,586,610                 | 280,584,161                 | 1.2             | 105,996,594                      | 48,393,811                       | 6,107,789                  | 11,476,078                   |

| Region/Country       | Inflation Rate<br>(Consumer Prices) | Total Roadways<br>(in km) | Total Vehicle Registrations | Persons Per Car | Parts Import<br>\$\$\$ ('000s)*1 | Parts Export<br>\$\$\$ ('000s)*1 | 2017 New Car Registrations | 2017 New Truck Registrations |
|----------------------|-------------------------------------|---------------------------|-----------------------------|-----------------|----------------------------------|----------------------------------|----------------------------|------------------------------|
| <b>SOUTH AMERICA</b> |                                     |                           |                             |                 |                                  |                                  |                            |                              |
| Argentina            | 26.9%                               | 231,374                   | 14,134,565                  | 3.1             | 17,609                           | 236,937                          | 663,498                    | 207,022                      |
| Brazil               | 3.7%                                | 1,580,964                 | 43,091,060                  | 4.8             | 536,995                          | 1,710,027                        | 1,854,815                  | 685,971                      |
| Chile                | 2.3%                                | 77,764                    | 4,939,770                   | 3.6             | 12,070                           | 173,730                          | 271,009                    | 86,566                       |
| Colombia             | 4.3%                                | 206,500                   | 5,483,567                   | 8.7             | 29,701                           | 125,650                          | 228,589                    | 36,826                       |
| Peru                 | 3.2%                                | 140,672                   | 4,000,507                   | 7.8             | 62,601                           | 93,333                           | 73,570                     | 35,931                       |
| Venezuela            | 652.7%                              | 96,189                    | 4,222,718                   | 7.4             | 808                              | 44,870                           | 260                        | 2,455                        |

| Region/Country                  | Inflation Rate<br>(Consumer Prices) | Total Roadways<br>(in km) | Total Vehicle Registrations | Persons Per Car | Parts Import<br>\$\$\$ ('000s)*1 | Parts Export<br>\$\$\$ ('000s)*1 | 2017 New Car Registrations | 2017 New Truck Registrations |
|---------------------------------|-------------------------------------|---------------------------|-----------------------------|-----------------|----------------------------------|----------------------------------|----------------------------|------------------------------|
| <b>MIDDLE EAST &amp; AFRICA</b> |                                     |                           |                             |                 |                                  |                                  |                            |                              |
| Algeria                         | 5.5%                                | 113,655                   | 5,686,473                   | 7.2             | 45                               | 5,430                            | 90,038                     | 7,366                        |
| D.R. of Congo                   | 41.7%                               | 153,497                   | 225,734                     | 369.0           | 13                               | 431                              | 3,499                      | 716                          |
| Egypt                           | 23.5%                               | 137,430                   | 5,950,559                   | 16.3            | 40,496                           | 54,387                           | 100,394                    | 37,628                       |
| Ghana                           | 11.8%                               | 109,515                   | 873,334                     | 31.5            | 285                              | 23,841                           | 10,514                     | 6,027                        |
| Iran                            | 10.5%                               | 198,866                   | 20,719,831                  | 4.0             | 3                                | 37                               | 1,528,322                  | 102,061                      |
| Iraq                            | 2.0%                                | 59,623                    | 1,564,125                   | 25.1            | 53                               | 38,770                           | 40,000                     | 12,600                       |
| Israel                          | 0.2%                                | 18,566                    | 3,106,541                   | 2.7             | 64,182                           | 34,102                           | 263,648                    | 24,643                       |
| Jordan                          | 3.3%                                | 7,203                     | 1,365,996                   | 7.5             | 759                              | 14,960                           | 108,458                    | 12,672                       |
| Kenya                           | 8.0%                                | 161,452                   | 1,416,891                   | 33.6            | 105                              | 1,141                            | 16,027                     | 3,416                        |
| Libya                           | 32.8%                               | 100,024                   | 2,496,278                   | 2.7             | 0                                | 3,035                            | 24,616                     | 1,965                        |
| Nigeria                         | 16.3%                               | 193,200                   | 7,075,978                   | 26.9            | 79                               | 76,481                           | 44,817                     | 3,196                        |
| Qatar                           | 0.9%                                | 9,830                     | 1,319,563                   | 1.8             | 258                              | 11,623                           | 43,978                     | n/a                          |
| Saudi Arabia                    | -0.2%                               | 221,372                   | 9,409,693                   | 3.0             | 1,672                            | 144,169                          | 508,723                    | 98,641                       |
| South Africa                    | 5.4%                                | 747,014                   | 10,192,919                  | 5.4             | 208,669                          | 270,011                          | 367,962                    | 183,338                      |
| Syria                           | 25.5%                               | 69,873                    | 1,558,659                   | 11.6            | 0                                | 0                                | 24,000                     | 1,900                        |

| Region/Country       | Total Vehicle Registrations |
|----------------------|-----------------------------|
| Europe               | 395,399,415                 |
| Asia                 | 436,810,056                 |
| North America        | 348,201,445                 |
| South America        | 75,872,187                  |
| Middle East & Africa | 72,962,572                  |

Notes: Population data estimated as of July 2017.

n/a: data not available

GDP and inflation rates are based on 2017 estimates

Sources: The World Factbook 2017, CIA. U.S. International Trade Commission, Automotive News, © 2018 IHS Markit, all rights reserved. IHS Markit, 248-728-7000, www.ihsmarkit.com.

\*1 U.S. International Trade Commission Import / Export data resource for U.S. auto parts: <http://dataweb.usitc.gov>

\*2 [www.populstat.info](http://www.populstat.info)

\*3 Qatar Statistics Authority: Registered New Vehicles and New Motor Cycles By Type of License <http://www.qsa.gov.qa>

Note: Import and exports are based on NAICS code 3363 Motor vehicle parts manufacturing

# U.S. Trade Data for Selected Motor Vehicle Products

## U.S. Trade Data for Selected Motor Vehicle Products, 2017 (Thousands of U.S. Dollars)

| HTS Code                           | Description  | Exports <sup>1</sup> | Imports <sup>2</sup> | Trade Balance |
|------------------------------------|--|----------------------|----------------------|---------------|
| <b>AIR CONDITIONING COMPONENTS</b> |  |                      |                      |               |
| 8414.30.8030                       | Compressors, Refrigerating and Air Conditioning, for Motor Vehicles  | \$497,567            | \$1,161,780          | -\$664,213    |
| 8414.59.6040                       | Other Fans and Blowers for Motor Vehicles  | \$145,670            | na                   | \$145,670     |
| 8415.20.0000                       | Automotive Air Conditioners  | \$146,375            | \$321,697            | -\$175,322    |
| 8415.90.8045                       | Automotive Air Conditioner Parts   | na                   | \$1,169,152          | -\$1,169,152  |
| <b>BODY PARTS</b>                  |  |                      |                      |               |
| 8301.20.0000                       | Base Metal Locks for Motor Vehicles  | \$140,500            | na                   | \$140,500     |
| 8302.10.3000                       | Base Metal Hinges and Parts for Motor Vehicles   | \$93,470             | \$300,022            | -\$206,552    |
| 8302.30.0000                       | Other Base Metal Mountings, Fittings and Similar Articles for Motor Vehicles                               | \$841,105            | na                   | \$841,105     |
| 8707.10.0020                       | Bodies or Cabs for Passenger Cars  | \$907,647            | \$25,690             | \$881,957     |
| 8707.10.0040                       | Bodies or Cabs for Transport of Persons Vehicles Except Passenger Cars                                     | \$12,531             | \$5,284              | \$12,531      |
| 8707.90.5020                       | Bodies or Cabs for Road Tractors of Semi-Trailers  | \$11,820             | \$4,799              | \$7,021       |
| 8707.90.5040                       | Bodies or Cabs for Public-Transport Type Passenger Motor Vehicles  | \$1,000              | \$220,914            | -\$219,914    |
| 8707.90.5060                       | Bodies or Cabs for Motor Vehicles for the Transport of Goods   | \$25,081             | \$517,221            | -\$492,140    |
| 8707.90.5080                       | Bodies or Cabs for Vehicles Other Than Those Designed for the Transport of Persons or Goods                | \$14,508             | \$27,650             | -\$13,142     |
| 8708.10.0010*                      | Stampings of Bumpers and Parts for Motor Vehicles Excluding Work Trucks, Tanks and Motorcycles             | \$139,383            | na                   | \$139,383     |
| 8708.10.0050                       | Bumpers and Parts for Motor Vehicles Excluding Work Trucks   | \$507,696            | na                   | \$507,696     |
| 8708.10.3050                       | Bumpers Excluding Stampings for Motor Vehicles Other Than Work Trucks                                      | na                   | \$396,303            | -\$396,303    |
| 8708.21.0000                       | Safety Seat Belts of Bodies or Cabs and Parts for Motor Vehicles   | \$96,851             | \$50,474             | \$46,377      |
| 8708.29.0000*                      | Other Body or Cabs Parts and Accessories for Motor Vehicles (na)   | na                   | na                   | \$0           |
| 8708.29.0010                       | Stampings of Bodies or Cabs and Parts Thereof for Vehicles Other Than Work Trucks, Tanks or Motorcycles    | \$1,465,267          | na                   | \$1,465,267   |
| 8708.29.5025                       | Truck Caps for Bodies of Motor Vehicles  | \$53,704             | \$12,351             | \$41,353      |
| <b>BRAKE COMPONENTS</b>            |  |                      |                      |               |
| 4009.12.0020                       | Brake Hoses With Fittings for Motor Vehicles Not Reinforced or Combined                                    | \$3,143              | \$720                | \$2,423       |
| 4009.22.0020                       | Brake Hoses With Fittings for Motor Vehicles Reinforced or Combined With Metal                             | \$4,410              | \$1,034              | \$3,376       |
| 4009.32.0020                       | Brake Hoses With Fittings for Motor Vehicles Reinforced or Combined With Textiles                          | \$22,960             | \$54,564             | -\$31,604     |
| 4009.42.0020                       | Brake Hoses With Fittings for Motor Vehicles Reinforced or Combined, NESOI                                 | \$10,282             | \$3,791              | \$6,491       |
| <b>ENGINE COMPONENTS</b>           |  |                      |                      |               |
| 4016.93.1010                       | Automotive O-Rings   | na                   | \$81,406             | -\$81,406     |
| 4016.93.1020                       | Automotive Oil Seals   | na                   | \$132,236            | -\$132,236    |
| 4016.93.1050                       | Automotive Gaskets, Washers and Seals  | na                   | \$696,468            | -\$696,468    |
| 4016.99.3000                       | Rubber Vibration Controls Goods  | na                   | \$213,341            | -\$213,341    |
| 4016.99.5500                       | Non-Rubber Vibration Control Goods for Motor Vehicles  | na                   | \$160,109            | -\$160,109    |
| 4016.99.5010**                     | Vulcanized Rubber Mechanical Articles for Motor Vehicles   | \$62,567             | na                   | \$0           |
| 8407.34.2030*                      | 1-2 Liter Spark-Ignition Piston Engines for Motor Vehicles   | \$907,089            | na                   | \$907,089     |
| 8407.34.2090                       | 2 Liter or Greater Spark-Ignition Piston Engines for Motor Vehicles  | \$4,135,911          | na                   | \$4,135,911   |
| 8408.20.2000                       | Compression-Ignition Piston Engines for Motor Vehicles   | \$4,018,866          | \$1,959,016          | \$2,059,850   |
| 8409.91.4000*                      | Parts for Spark-Ignition Piston Engines for Motor Vehicles   | \$20,655,707         | na                   | \$20,655,707  |
| 8409.99.4000*                      | Parts for Compression-Ignition Piston Engines for Motor Vehicles   | \$907,087            | na                   | \$907,087     |
| 8413.30.1000                       | Fuel-Injection Pumps for Compression-Ignition Engines  | \$259,728            | \$451,320            | \$259,728     |
| 8413.30.9000*                      | Other Fuel, Lubricating or Cooling Medium Pumps for Piston Engines   | \$706,717            | na                   | \$706,717     |
| 8413.91.1000                       | Parts of Fuel-Injection Pumps for Compression-Ignition Engines   | \$219,617            | \$157,609            | \$62,008      |
| 8414.59.3000                       | Turbo Chargers and Superchargers of Fans   | \$44,850             | \$122,385            | \$44,850      |
| 8421.23.0000                       | Oil or Fuel Filters for Internal Combustion Engines  | \$835,216            | \$768,063            | \$835,216     |
| 8421.31.0000                       | Intake Air Filters for Internal Combustion Engines   | \$447,068            | \$428,521            | \$18,547      |
| 8483.10.1020*                      | Camshafts and Crankshafts for Use With Spark-Ignition Piston Engines or Rotary Engines, for Motor Vehicles | \$408,857            | na                   | \$408,857     |
| 8483.10.3010                       | Other Camshafts and Crankshafts for Motor Vehicles   | \$98,148             | \$214,185            | -\$214,185    |
| 8483.10.3050                       | Camshafts and Crankshafts  | \$105,176            | \$174,138            | -\$68,962     |
| 8511.10.0000                       | Spark Plugs for Internal Combustion Engines  | \$185,865            | \$474,669            | -\$288,804    |
| 8511.20.0000                       | Magnetos, Magneto-Dynamos and Magnetic Flywheels for Internal Combustion Engines                           | \$13,743             | \$21,859             | -\$8,116      |
| 8511.30.0040                       | Distributors for Internal Combustion Engines   | \$10,666             | \$31,453             | -\$20,787     |
| 8511.30.0080                       | Ignition Coils for Internal Combustion Engines   | \$158,919            | \$496,525            | -\$337,606    |



# U.S. Trade Data for Selected Motor Vehicle Products

## U.S. Trade Data for Selected Motor Vehicle Products, 2017 (Thousands of U.S. Dollars)

| HTS Code                                  | Description  | Exports <sup>1</sup> | Imports <sup>2</sup> | Trade Balance |
|---|--|----------------------|----------------------|---------------|
| <b>ENGINE COMPONENTS (CONTINUED)</b>      |  |                      |                      |               |
| 8511.40.0000                              | Starter Motors and Dual Purpose Starter-Generators for Internal Combustion Engines                           | \$517,151            | \$1,194,157          | -\$677,006    |
| 8511.50.0000                              | Other Generators for Internal Combustion Engines   | \$527,535            | \$1,139,715          | -\$612,180    |
| 8511.80.2000                              | Voltage Regulators With Cut-Out Relays for Internal Combustion Engines                                       | na                   | na                   | \$0           |
| 8511.80.6000                              | Other Internal Combustion Engine Ignition Equipment  | na                   | na                   | \$0           |
| 8511.90.6020                              | Distributor Breaker Point Sets and Parts for Internal Combustion Engines                                     | na                   | na                   | \$0           |
| 8511.90.8000*                             | Electrical Apparatus Parts for Internal Combustion Engines   | na                   | na                   | \$0           |
| 8544.30.0000                              | Insulated Ignition Wiring Sets and Wiring Sets for Motor Vehicles  | na                   | na                   | \$0           |
| 8708.91.7510                              | Radiator Cores for Motor Vehicles  | na                   | na                   | \$0           |
| <b>GLASS AND MIRROR COMPONENTS</b>        |  |                      |                      |               |
| 7007.11.0000                              | Toughened (Tempered) Safety Glass for Motor Vehicles   | na                   | na                   | \$0           |
| 7007.21.1000                              | Laminated Safety Glass Windshields   | \$83,767             | na                   | \$83,767      |
| 7007.21.5000                              | Other Laminated Safety Glass for Motor Vehicles  | \$51,558             | \$43,631             | \$7,927       |
| 7009.10.0000                              | Rear-View Mirrors for Vehicles   | \$1,522,869          | \$267,350            | \$1,255,519   |
| <b>LIGHTING AND ELECTRICAL COMPONENTS</b> |  |                      |                      |               |
| 8501.32.4500                              | Electric Motors Used as the Primary Source of Mechanical Power for Electric Powered Vehicles                 | na                   | \$5,158              | -\$5,158      |
| 8507.10.0030                              | 12 Volt Storage Batteries, Lead-Acid for Piston Engines Not Exceeding 6 kg                                   | \$39,749             | \$72,231             | -\$32,482     |
| 8507.10.0060                              | 12 Volt Lead-Acid Storage Batteries, for Piston Engines Exceeding 6 kg                                       | \$536,147            | \$1,229,486          | -\$693,339    |
| 8507.10.0090                              | Storage Batteries, Lead-Acid for Piston Engines, Other Than 12 Volt  | \$80,340             | \$84,009             | -\$3,669      |
| 8507.30.4000                              | Nickel-Cadmium Storage Batteries as the Primary Source of Electrical Power for Electrically Powered Vehicles | na                   | \$481                | -\$481        |
| 8507.90.4000                              | Parts for Lead Acid Storage Batteries  | \$133,059            | \$40,077             | \$92,982      |
| 8512.20.2000*                             | Motor Vehicle Lighting Equipment   | \$909,417            | na                   | \$909,417     |
| 8512.20.4000*                             | Motor Vehicle Visual Signaling Equipment   | \$329,907            | na                   | \$329,907     |
| 8512.30.0050*                             | Electrical Sound Signaling Equipment for Motor Vehicles  | \$94,083             | na                   | \$94,083      |
| 8512.40.2000                              | Defrosters and Demisters for Motor Vehicles  | \$988                | \$1,725              | -\$737        |
| 8512.40.4000                              | Windshield Wipers for Motor Vehicles   | \$56,658             | \$161,197            | -\$104,539    |
| 8512.90.2000                              | Signaling Equipment Parts for Motor Vehicles   | \$78,285             | \$177,727            | -\$99,442     |
| 8512.90.5000                              | Lighting Equipment Parts for Motor Vehicles  | \$186,338            | na                   | \$186,338     |
| 8512.90.8000*                             | Windshield Wipers, Defrosters and Demisters Parts for Motor Vehicles   | \$174,284            | na                   | \$174,284     |
| 8536.41.0005                              | Automotive Signaling Flashers Not Exceeding 60 Volts   | \$22,140             | \$3,391              | \$18,749      |
| 8539.10.0020                              | Sealed Beam Lamp Units Under 15.24 cm  | \$14,349             | na                   | \$14,349      |
| 8539.10.0040                              | Sealed Beam Lamp Units 15.24 cm or Over  | \$82,306             | na                   | \$82,306      |
| 8539.21.2000                              | Tungsten Halogen Filament Lamps Not Exceeding 100 Volts  | \$53,777             | na                   | \$53,777      |
| <b>RADIO ELECTRONIC COMPONENTS</b>        |  |                      |                      |               |
| 8512.30.0030                              | Radar Detectors for Motor Vehicles   | \$10,566             | \$38,271             | -\$27,705     |
| 8527.21.0000                              | Radiobroadcast Receivers for Motor Vehicles Combo and rec/rep  | \$344,035            | na                   | \$344,035     |
| 8527.29.0000                              | Radiobroadcast Receivers for Motor Vehicles  | \$120,085            | na                   | \$120,085     |
| <b>TIRES AND WHEELS</b>                   |  |                      |                      |               |
| 4011.10.1000*                             | Radial Tires for Motor Cars  | \$2,898,221          | na                   | \$2,898,221   |
| 4011.10.5000                              | Non-Radial Tires for Cars  | \$99,627             | \$108,905            | -\$9,278      |
| 4011.20.1005                              | Radial Tires for Light Trucks  | \$835,284            | \$1,809,075          | -\$973,791    |
| 4011.20.1015                              | New Radial Tires for Buses/Trucks With a Rim Diameter Measuring 40.6 cm or More                              | \$633,423            | \$2,169,625          | -\$1,536,202  |
| 4011.20.1025                              | New Radial Tires for Buses/Trucks With a Rim Diameter Measuring 40.6 cm or More                              | \$33,984             | \$8,418              | \$25,566      |
| 4011.20.1035                              | New Radial Tires for Buses/Trucks With a Rim Diameter Measuring Less Than 40.6 cm                            | \$3,423              | \$2,104              | \$1,319       |
| 4011.20.5010                              | New Radial Tires for Light Trucks  | \$17,690             | \$6,740              | \$10,950      |
| 4011.20.5020                              | New Radial Tires for Use on Buses/Trucks   | \$4,688              | \$32,011             | -\$27,323     |
| 4011.20.5030                              | Off-Road, New Radial Tires, for Buses/Trucks With a Rim Diameter Measuring 40.6 cm or More                   | \$4,679              | \$187                | \$4,492       |
| 4011.20.5050                              | Off-Road, New Radial Tires, for Buses/Trucks With a Rim Diameter Measuring Less Than 40.6 cm                 | \$14,926             | \$1,316              | \$13,610      |
| 4012.11.0000                              | Retreaded Tires, Rubber Used on Motor Cars and Light Trucks  | \$1,972              | na                   | \$1,972       |
| 4012.12.0000                              | Retreaded Tires for Trucks and Buses   | \$3,315              | na                   | \$3,315       |
| 4012.20.0000*                             | Used Tires   | \$23,111             | na                   | \$23,111      |
| 4013.90.0000**                            | Inner Tubes  | \$8,817              | na                   | \$8,817       |

# U.S. Trade Data for Selected Motor Vehicle Products

## U.S. Trade Data for Selected Motor Vehicle Products, 2017 (Thousands of U.S. Dollars)

| HTS Code                                  | Description  | Exports <sup>1</sup> | Imports <sup>2</sup> | Trade Balance |
|---|--|----------------------|----------------------|---------------|
| <b>UNDERCAR AND DRIVETRAIN COMPONENTS</b> |  |                      |                      |               |
| 7318.16.0015                              | Iron or Steel Non-Locking Chrome-Plated Lugnuts  | na                   | \$17,244             | -\$17,244     |
| 7318.16.0030                              | Iron or Steel Locking Lugnuts  | na                   | \$26,552             | -\$26,552     |
| 7318.16.0045                              | Lugnuts of Iron Or Steel, NESOI  | na                   | \$41,964             | -\$41,964     |
| 7320.10.0000*                             | Iron or Steel Leaf Springs and Leaves  | na                   | na                   | \$0           |
| 7320.20.1000                              | Iron or Steel Helical Springs Suitable for Motor-Vehicle Suspension  | \$179,539            | \$84,658             | \$94,881      |
| 8421.39.4000                              | Catalytic Converters for Motor Vehicles  | \$921,037            | \$1,274,237          | -\$353,200    |
| 8482.10.1000*                             | Ball Bearings With Integral Shafts   | \$57,295             | na                   | \$57,295      |
| 8482.10.5032                              | Single Row Radial Ball Bearings, Maximum or Full Capacity Type   | \$12,414             | \$39,161             | -\$26,747     |
| 8482.10.5036                              | Single Row Radial Ball Bearings, With an Outside Diameter Under 9 mm   | \$5,593              | \$15,492             | -\$9,899      |
| 8482.10.5044                              | Single Row Radial Ball Bearings, With an Outside Diameter Between 9 mm and 30 mm                             | \$18,875             | \$85,743             | -\$66,868     |
| 8482.10.5048                              | Single Row Radial Ball Bearings, With an Outside Diameter Between 30 mm and 52 mm                            | \$32,882             | \$171,726            | -\$138,844    |
| 8482.10.5052                              | Single Row Radial Ball Bearings, With an Outside Diameter Between 52 mm and 100 mm                           | \$41,279             | \$225,603            | -\$184,324    |
| 8482.10.5056                              | Single Row Radial Ball Bearings, With an Outside Diameter Over 100 mm  | \$52,079             | \$100,535            | -\$48,456     |
| 8482.10.5060                              | Double Row Radial Ball Bearings  | \$21,652             | \$37,459             | -\$15,807     |
| 8482.10.5064                              | Radial Ball Bearings   | \$73,908             | \$11,437             | \$62,471      |
| 8482.20.0020                              | Cup and Cone Tapered Roller Bearing Assemblies Sets With Flanged Wheel Hub Units                             | \$27,929             | \$23,735             | \$4,194       |
| 8482.20.0030                              | Cup and Cone Tapered Roller Bearing Assemblies Sets With Non-Flanged Wheel Hub Units                         | \$19,213             | \$6,888              | \$12,325      |
| 8482.20.0040                              | Cup and Cone Tapered Roller Bearing Assemblies Sets With Outside Diameter of Cup Not Exceeding 102 mm        | \$49,301             | \$105,923            | -\$56,622     |
| 8482.20.0060                              | Cup and Cone Tapered Roller Assemblies Exported As A Set, NESOI  | \$175,500            | na                   | \$175,500     |
| 8482.20.0070                              | Cone Tapered Roller Assemblies Exported Separately, for Cups Having An Outside Diameter Not Exceeding 102 Mm | \$50,238             | \$74,610             | -\$24,372     |
| 8482.20.0080                              | Cone Tapered Roller Assemblies Exported Separately, NESOI  | \$115,393            | na                   | \$115,393     |
| 8482.40.0000                              | Needle Roller Bearings   | \$107,439            | \$138,060            | -\$30,621     |
| 8482.50.0000                              | Other Cylindrical Roller Bearings  | \$184,897            | \$339,227            | -\$154,330    |
| 8708.40.1110                              | Gear Boxes and Parts for Trucks and Buses  | na                   | na                   | \$0           |
| 8708.40.2000                              | Gear Boxes and Parts for Passenger Cars  | na                   | na                   | \$0           |
| 8708.40.6000*                             | Gear Boxes for Other Vehicles  | na                   | \$43,225             | -\$43,225     |
| 8708.50.0050*                             | Other Drive Axles With Differential for Motor Vehicles   | na                   | na                   | \$0           |
| 8708.50.6500*                             | Non-Driving Axles and Parts for Motor Vehicles   | na                   | na                   | \$0           |
| 8708.70.0050*                             | Other Road Wheels, Parts and Accessories for Motor Vehicles  | \$657,295            | na                   | \$657,295     |
| 8708.80.5000*                             | Other Suspension Shock Absorbers for Motor Vehicles  | na                   | na                   | \$0           |
| 8708.91.5000                              | Radiators for Vehicles   | \$227,690            | \$736,189            | -\$508,499    |
| 8708.92.5000                              | Mufflers and Exhaust Pipes for Motor Vehicles  | \$569,619            | \$535,149            | \$34,470      |
| 8708.93.5000*                             | Clutches and Parts for Motor Vehicles  | \$689,253            | na                   | \$689,253     |
| 8708.94.5000                              | Steering Wheels, Steering Columns and Steering Boxes for Motor Vehicles                                      | \$1,155,613          | \$1,617,362          | -\$461,749    |
| 8708.99.5300                              | Cast Iron Parts for Motor Vehicles   | na                   | na                   | \$0           |
| 8708.99.5500                              | Vibration Control Parts Containing Rubber for Motor Vehicles   | na                   | \$438,541            | -\$438,541    |
| 8708.99.5800                              | Double Flanged Wheel Hub Units With Ball Bearings for Motor Vehicles   | \$30,319             | \$201,176            | -\$170,857    |
| 8708.99.6805                              | Half-Shaft and Drive Shafts for Motor Vehicles   | na                   | na                   | \$0           |
| 8708.99.6810                              | Other Parts for Powertrain, forged Universal Joint for Motor Vehicles  | na                   | na                   | \$0           |
| 8708.99.6890*                             | Other Parts for Power Trains for Motor Vehicles  | na                   | na                   | \$0           |
| 8708.99.8105                              | Plastic Brake Hoses With Attached Fittings for Motor Vehicles  | na                   | na                   | \$0           |
| 8708.99.8160                              | Cable Traction Devices of Motor Vehicles   | na                   | na                   | \$0           |
| 8708.99.8115                              | Double Flanged Wheel Hub Units Without Ball Bearings for Motor Vehicles                                      | na                   | na                   | \$0           |
| <b>CHEMICALS AND LUBRICANTS</b>           |  |                      |                      |               |
| 2710.19.3020                              | Automotive, Diesel or Marine Engine (Except Turbine) Lubricating Oils  | \$1,816,091          | \$847,988            | \$968,103     |
| 2710.19.3040                              | Automotive Gear Oils   | \$131,190            |                      | \$131,190     |
| 3403.19.0000                              | Lubricating Preparations Containing Petroleum Oils or Oils Obtained From Bituminous Minerals                 | \$621,218            | na                   | \$621,218     |
| 3405.30.0000                              | Polishes and Similar Preparations for Coachwork, Other Than Metal Polishes                                   | \$61,210             | \$12,482             | \$48,728      |
| 3811.11.0000*                             | Antiknock Preparations Based on Lead Compounds   | \$1,037              | na                   | \$1,037       |
| 3811.19.0000                              | Antiknock Preparations, NESOI  | \$48,360             | \$1,666              | \$46,694      |
| 3819.00.0000*                             | Hydraulic Brake Fluids and Other Prepared Liquids for Hydraulic Transmission                                 | \$152,951            | na                   | \$152,951     |
| 3820.00.0000                              | Antifreezing and Deicing Fluids  | \$164,216            | \$29,144             | \$135,072     |

# U.S. Trade Data for Selected Motor Vehicle Products

## U.S. Trade Data for Selected Motor Vehicle Products, 2017 (Thousands of U.S. Dollars)

| HTS Code                   | Description   | Exports <sup>1</sup> | Imports <sup>2</sup> | Trade Balance       |
|----------------------------|---|----------------------|----------------------|---------------------|
| <b>TOOLS AND EQUIPMENT</b> |   |                      |                      |                     |
| 8425.49.0000               | Jacks and Hoists for Raising Vehicles   | \$57,626             | \$304,049            | -\$246,423          |
| 8426.91.0000               | Lifting Machinery Designed for Mounting on Road Vehicles  | \$99,754             | \$129,895            | -\$30,141           |
| 8431.10.0090               | Parts of Winches, Capstans and Jacks  | \$102,093            | \$267,185            | -\$165,092          |
| <b>OTHER COMPONENTS</b>    |   |                      |                      |                     |
| 3917.40.0000*              | Fittings for Tubes, Pipes and Hoses, of Plastic   | \$549,078            | na                   | \$549,078           |
| 3926.90.5500               | Belting and Belts, for Machinery, Containing Textile Fibers, V-Belts  | \$11,843             | \$16,168             | -\$4,325            |
| 3926.90.5600               | Belting and Belts, for Machinery, With Textile Composition In Which Vegetable Fibers Predominate By Weight Over Any Other Textile Fiber | na                   | \$777                | -\$777              |
| 3926.90.5700               | Belting and Belts, for Machinery, With Textile Composition In Which Man-Made Fibers Predominate By Weight Over Any Other Textile Fiber  | na                   | \$6,469              | -\$6,469            |
| 3926.90.5900               | Belting and Belts, for Machinery, Containing Textile Fibers, NESOI  | na                   | \$24,827             | -\$24,827           |
| 3926.90.6010               | Synchronous Belts for Machinery   | na                   | \$8,958              | -\$8,958            |
| 3926.90.6090               | Belting and Belts for Machinery, NESOI  | na                   | \$45,789             | -\$45,789           |
| 8708.99.8130               | Slide-In Campers for Motor Vehicles   | na                   | na                   | \$0                 |
| 8708.99.8160               | Cable Traction Devices for Motor Vehicles   | na                   | na                   | \$0                 |
| 8708.99.8175               | Parts and Accessories for Motor Vehicles  | na                   | na                   | \$0                 |
| 8716.90.0000*              | Non-Propelled Mechanical Parts for Trailers, Semi-Trailers and Vehicles   | na                   | na                   | \$0                 |
| 9029.10.0000*              | Revolution Counters, Production Counters, Taximeters, Odometers and Pedometers  | na                   | na                   | \$0                 |
| 9029.20.5000               | Speedometers and Tachometers for Motor Vehicles   | \$263,716            | na                   | \$263,716           |
| 9029.90.0000*              | Parts and Accessories for Revolution Counters, Production Counters, Taximeters, Odometers and Pedometers                                | \$45,616             | na                   | \$45,616            |
| 9104.00.0000*              | Instrument Panel Clocks and Clocks for Motor Vehicles   | na                   | na                   | \$0                 |
| 9401.20.0000*              | Seats for Motor Vehicles, Including Child Safety Seats  | \$280,390            | \$178,934            | \$101,456           |
| 9401.90.1010               | Leather, Cut To Shape Seat Parts for Motor Vehicles   | \$407,276            | \$1,215,173          | -\$807,897          |
| 9401.90.1080               | Seat Parts for Motor Vehicles   | \$1,346,346          | na                   | \$1,346,346         |
| 9403.40.6000               | Kitchen Type Wooden Furniture for Motor Vehicles  | na                   | \$541                | -\$541              |
| 9403.50.6000               | Bedroom Type Wooden Furniture for Motor Vehicles  | na                   | \$1,820              | -\$1,820            |
| 9403.90.1000**             | Furniture Parts for Motor Vehicles  | \$20,724             | na                   | \$20,724            |
| 9802.00.5030               | Non-Warranty Repairs on Internal Combustion Engines   | na                   | \$56,262             | -\$56,262           |
|                            | <b>Total</b>  | <b>\$61,532,307</b>  | <b>\$28,993,759</b>  | <b>\$33,724,885</b> |

Notes: Numbers may not sum due to rounding.  
na = data not available.

<sup>1</sup> Exports refer to "Domestic Exports." Domestic Exports are the merchandise exported from the United States which are either 1) products produced or manufactured in the United States, or 2) products of foreign origin which have been changed or enhanced in value in the United States (or in U.S. Foreign Trade Zones) by further manufacture. Export data are calculated based on the FAS (Free Along Ship) value.

<sup>2</sup> Imports refer to "Imports for Consumption." Imports for Consumption are merchandise that has physically cleared Customs either entering consumption channels immediately or entering after withdrawal from bonded warehouses under Customs custody or from Foreign Trade Zones. Import data are calculated based on Customs value.

\* Indicates multiple import codes were used for this category.

\*\* Indicates multiple import and export codes were used for this category.

Data retrieved on March 06, 2018

Some HTS Codes may not correspond exactly between export and import figures although the item is the same.

Source: Global Trade Information Service and U.S. International Trade Commission

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# Canada Auto Care Industry

The Canadian auto care industry's retail sales totaled \$21.3 billion in 2016, representing a 1.4 percent increase from 2015's \$20.9 billion.

Within Canada's geographic auto care hierarchy, Ontario contributed 34.7 percent of 2016 auto care industry dollars (\$7.4 billion), increasing 2.9 percent in total revenue from 2015. With the exception of Atlantic and Prairies, the selected regions experienced increases in total revenue from last year. Prairies had a small decrease in revenue among the regions, down 0.1 percent to \$4.8 billion, while contributing 22.6 percent of total national industry revenues.

In terms of the number of establishments (See page 94), two of four auto care professional technician and retail locations showed unit increases in 2016. The number of automotive parts and accessories retailers grew 5.1 percent from 4,656 locations in 2015 to 4,893 in 2016, culminating in 10-year, 2.1 percent compounded annual growth.

Oil changes remain the most common maintenance and repair item among all automotive services performed in Canada. Jobs in this sector totaled 48.3 million in 2016. (See page 94). The auto care industry is strong in Canada, in part because Canadian drivers keep their cars an average of 9.6 years. (See page 95).

## Size of the Canadian Automotive Parts and Service Aftermarket by Region, 2016

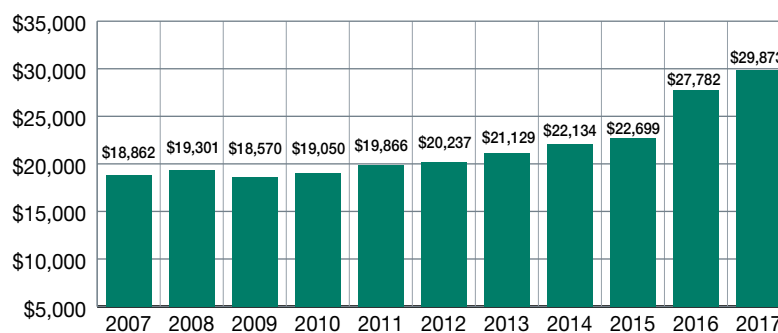
(Total Retail Sales, Millions of Canadian Dollars)

| Region           | 2012     | 2013     | 2014     | 2015     | 2016     | % Change 2015-2016 |
|------------------|----------|----------|----------|----------|----------|--------------------|
| Atlantic         | \$1,379  | \$1,395  | \$1,365  | \$1,405  | \$1,374  | -2.2%              |
| British Columbia | \$2,949  | \$3,094  | \$3,100  | \$3,191  | \$3,289  | 3.1%               |
| Ontario          | \$6,401  | \$6,716  | \$6,843  | \$7,184  | \$7,392  | 2.9%               |
| Prairies         | \$4,654  | \$4,757  | \$4,747  | \$4,820  | \$4,814  | -0.1%              |
| Quebec           | \$3,928  | \$4,129  | \$4,399  | \$4,395  | \$4,410  | 0.3%               |
| Canada Total     | \$19,310 | \$20,090 | \$20,454 | \$20,995 | \$21,279 | 1.4%               |
| YOY % Change     |          | 4.0%     | 1.8%     | 2.6%     | 1.4%     |                    |

Note: Excludes Paint, Body Work, Equipment, Heavy Duty Truck, Bus and Motorcycle.

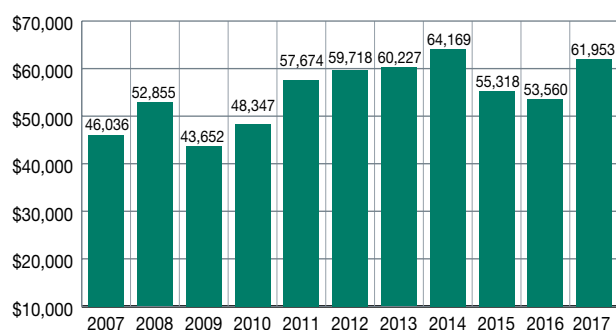
Source: DesRosiers Automotive Consultants Inc. / Canada. Further reproduction prohibited without written authorization from DesRosiers Automotive Consultants Inc.

## Used and Recreational Motor Vehicle and Parts Dealers Retail Sales, 2007–2017 (Millions of Canadian Dollars)



Sources: DesRosiers Automotive Consultants, Inc. and Statistics Canada

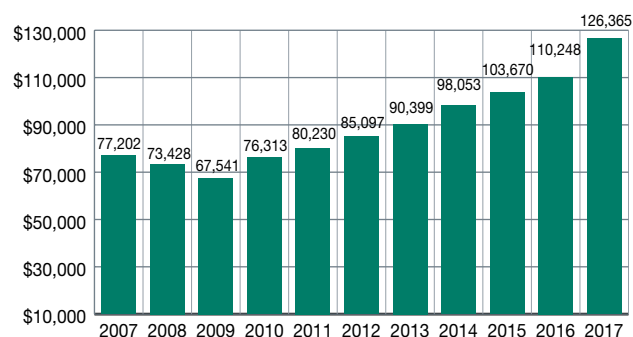
## Canadian Gasoline Stations Retail Sales, 2007–2017 (Millions of Canadian Dollars)



Source: DesRosiers Automotive Consultants, Inc.

Note: Gasoline stations include gasoline stations with convenience stores and other gasoline stations.

## Canadian New Car Dealers–Retail Sales, 2007–2017 (Millions of Canadian Dollars)



Source: DesRosiers Automotive Consultants, Inc.

# Canada Auto Care Industry

## Canadian Aftermarket Installers and Retailers

(Number of Establishments)

| Type of Outlet  | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 10-Yr. CAGR<br>(2006–2016) | Percentage<br>Change<br>(2015–2016) |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------------------|-------------------------------------|
| Parts and Accessories Wholesalers <sup>1</sup>          | 3,296  | 3,261  | 3,162  | 3,278  | 4,409  | 3,046  | 3,036  | 3,062  | 2,944  | 2,892  | 2,925  | -1.2%                      | 1.1%                                |
| Gasoline Service Stations <sup>2</sup>                  | 10,611 | 10,447 | 10,237 | 10,370 | 10,400 | 10,264 | 10,111 | 10,115 | 9,814  | 9,582  | 9,541  | -1.1%                      | -0.4%                               |
| Automotive Parts and Accessories Retailers <sup>3</sup> | 3,967  | 4,142  | 4,038  | 4,347  | 6,094  | 4,408  | 4,454  | 4,756  | 4,645  | 4,656  | 4,893  | 2.1%                       | 5.1%                                |
| Motor Vehicle Repair Shops <sup>4</sup>                 | 22,855 | 22,033 | 21,869 | 22,561 | 37,060 | 22,570 | 22,722 | 23,592 | 22,762 | 23,050 | 23,556 | 0.3%                       | 2.2%                                |

Notes: Figures do not include “indeterminate” establishments – those that do not maintain an employee payroll, but may have a work force consisting of contracted workers, part-time employees, family members, or business owners.

<sup>1</sup> Formerly SIC 552, <sup>2</sup> Formerly SIC 633, <sup>3</sup> Formerly SIC 634, <sup>4</sup> Formerly SIC 635 Also note: Gasoline Service Stations for 2010 are estimated.

Source: Statistics Canada and DesRosiers Automotive Consultants Inc.

## DIY Purchases and DIFM Repairs by Type of Service

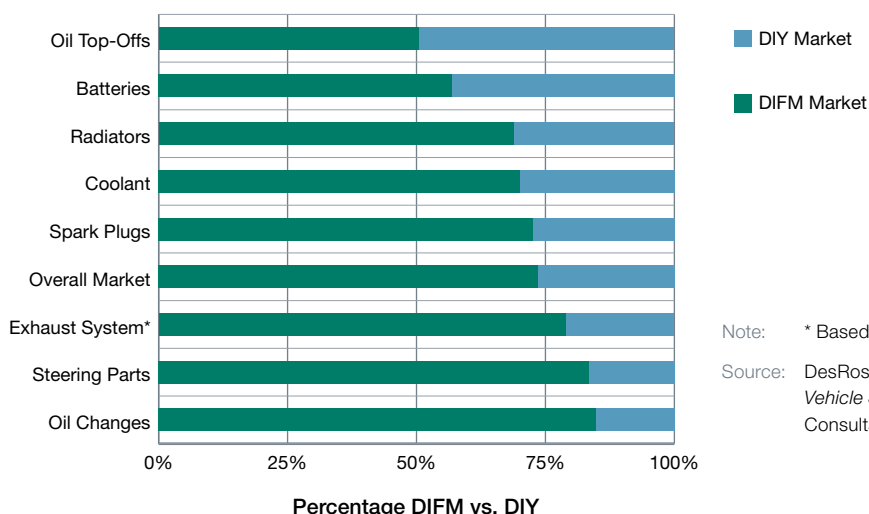
(Millions of Jobs)

| Item              | 2013 | 2014 | 2015 | 2016 |
|-------------------|------|------|------|------|
| Oil Changes       | 45.9 | 46.7 | 47.2 | 48.3 |
| Air Filters       | 12.6 | 12.8 | 12.9 | 13.0 |
| Wiper Blades      | 9.5  | 9.9  | 10.7 | 12.1 |
| Brake Work        | 6.1  | 6.3  | 6.4  | 6.5  |
| Headlamps         | 5.2  | 5.9  | 6.2  | 6.4  |
| Cabin Air Filters | 3.2  | 3.7  | 4.1  | 4.3  |
| Coolant Replaced  | 3.5  | 3.7  | 3.7  | 3.6  |
| Batteries         | 2.7  | 2.9  | 3.0  | 3.2  |

Note: Due to a change in methodology, historically reported numbers are not comparable to current data.

Source: DesRosiers Automotive Consultants Inc. *Light Vehicle Study, 2002-2016*, © DesRosiers Automotive Consultants Inc.

## Selected DIFM and DIY Rates in Canada, 2016



Note: \* Based on muffler repairs.

Source: DesRosiers Automotive Consultants Inc. *Light Vehicle Study, 2016*, © DesRosiers Automotive Consultants Inc.



# Canada Top 10 Light Vehicles

Total calendar year sales of Canadian light vehicles in 2017 increased by 4.6 percent to 2,038,798 from 2016's 1,948,899. That is a very good indicator of Canadian consumer confidence as volume continues to grow from the lows witnessed during the economic downturn in 2009.

Driving this 4.6 percent increase was a continued shift in the sales mix from passenger cars to light trucks, with light trucks continuing to increase their share of total vehicle sales. In 2017, light truck sales increased 8.7 percent to command 68.6 percent of the Canadian market.

On the other hand, passenger cars sales dropped 3.4 percent in 2017 and now make up 31.4 percent of 2017 units sales. While the top four light truck sales remained domestic nameplates in 2017, the Chevrolet Cruze broke into the top five passenger car sales as the lone domestic nameplate.

## Top 10 Canadian Light Vehicle Sales

(Based on 2017 CY Sales Rank)

| Top 10 Passenger Car Sales                         | Unit Sales     |                | % Change<br>2016/2017 | 2016<br>Rank |
|--|----------------|----------------|-----------------------|--------------|
|  | 2016           | 2017           |                       |              |
| Honda Civic  | 64,552         | 69,030         | 6.9%                  | 1            |
| Toyota Corolla                                     | 45,626         | 50,332         | 10.3%                 | 3            |
| Hyundai Elantra                                    | 48,875         | 46,112         | -5.7%                 | 2            |
| Mazda3   | 27,689         | 27,862         | 0.6%                  | 4            |
| Chevrolet Cruze                                    | 26,824         | 27,520         | 2.6%                  | 5            |
| Volkswagen Golf                                    | 17,513         | 22,288         | 27.3%                 | 8            |
| Volkswagen Jetta                                   | 20,954         | 17,483         | -16.6%                | 6            |
| Kia Forte  | 12,296         | 16,388         | 33.3%                 | 14           |
| Toyota Camry                                       | 15,683         | 14,574         | -7.1%                 | 10           |
| Nissan Sentra                                      | 14,281         | 13,883         | -2.8%                 | 12           |
| <b>Top 10 Passenger Car Sales - Total</b>          | <b>294,293</b> | <b>305,472</b> | <b>3.8%</b>           | <b>--</b>    |
| <b>Total Canadian Passenger Car Sales</b>          | <b>662,102</b> | <b>639,823</b> | <b>-3.4%</b>          | <b>--</b>    |
| <b>Top 10 Passenger Car Sales Percent of Total</b> | <b>44.4%</b>   | <b>47.7%</b>   | <b>--</b>             | <b>--</b>    |

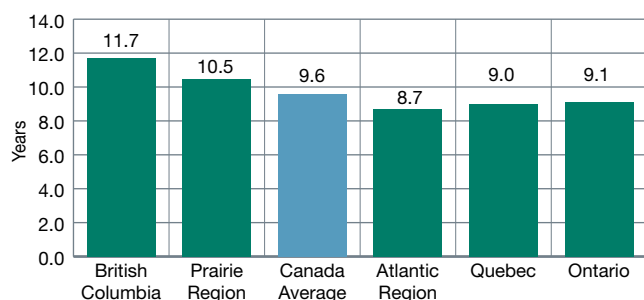
| Top 10 Selling Light Trucks                      | Unit Sales       |                  | % Change<br>2016/2017 | 2016<br>Rank |
|--|------------------|------------------|-----------------------|--------------|
|  | 2016             | 2017             |                       |              |
| Ford F-Series                                    | 145,409          | 155,290          | 6.8%                  | 1            |
| Ram Pickup                                       | 89,048           | 98,465           | 10.6%                 | 2            |
| GMC Sierra                                       | 51,091           | 61,883           | 21.1%                 | 4            |
| Chevrolet Silverado                              | 44,932           | 59,066           | 31.5%                 | 7            |
| Toyota RAV4                                      | 49,103           | 50,894           | 3.6%                  | 5            |
| Honda CR-V                                       | 44,789           | 50,443           | 12.6%                 | 8            |
| Ford Escape                                      | 46,661           | 47,880           | 2.6%                  | 6            |
| Dodge Caravan                                    | 51,349           | 46,933           | -8.6%                 | 3            |
| Nissan Rogue                                     | 40,055           | 43,418           | 8.4%                  | 9            |
| Hyundai Tucson                                   | 23,789           | 30,467           | 28.1%                 | 13           |
| <b>Top 10 Light Truck Sales - Total</b>          | <b>586,226</b>   | <b>644,739</b>   | <b>10.0%</b>          | <b>--</b>    |
| <b>Total Canadian Light Truck Sales</b>          | <b>1,286,797</b> | <b>1,398,975</b> | <b>8.7%</b>           | <b>--</b>    |
| <b>Top 10 Light Truck Sales Percent of Total</b> | <b>45.6%</b>     | <b>46.1%</b>     | <b>--</b>             | <b>--</b>    |

| Canadian Light Vehicle Summary            | Unit Sales       |                  | % Change<br>2016/2017 |
|---|------------------|------------------|-----------------------|
|   | 2016             | 2017             |                       |
| <b>Total Canadian Light Vehicle Sales</b> | <b>1,948,899</b> | <b>2,038,798</b> | <b>4.6%</b>           |
| <b>Passenger Car Percent of Sales</b>     | <b>34.0%</b>     | <b>31.4%</b>     | <b>--</b>             |
| <b>Light Truck Percent of Sales</b>       | <b>66.0%</b>     | <b>68.6%</b>     | <b>--</b>             |

Source: DesRosiers Automotive Consultants Inc., GAC and CVMA / Canada

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## Average Age of Vehicles in Canada, 2015



By the numbers....

**9.6 Years**

Average vehicle age  
in Canada

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**PRODUCT #75069**

## 2017 Mexico Market Report

\$2,100 MEMBER

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An Assessment of Mexico's Aftermarket is also a first report resulting from the partnership between Integrate Data Facts (IDF), LLC and the Auto Care Association. The Mexican market has become more important due to the North American Free Trade Agreement (NAFTA) which helped stimulate growth in both the number of vehicles on the road and in the miles driven in Mexico. This report provides valuable insights on a broad spectrum of relevant topics including basic country facts, manufacturing employment, auto parts manufacturing, new vehicle sales, distribution, age of vehicles and VIO, miles traveled, and used imports vs. new vehicle VIO comparisons.

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# Mexico Auto Care Industry

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**PRODUCT #75068**

## 2017 China Market Report

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This report is a comprehensive assessment covering many of the major aspects of the developing China automotive aftermarket. In collaboration with Solidiance, the China Market Report presents dynamic opportunities for companies looking to expand. While China's automotive industry has begun to slow in terms of new vehicle sales after over a decade of blistering growth, the parts and repair aftermarket continues to expand more significantly as a result of a larger and older automotive parc. The strong vehicle growth over the last 10 years has created an increasingly sizeable and diverse light passenger vehicle parc which has now reached approximately 139 million vehicles.

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# China Auto Care Industry

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# Glossary and References

in this section

## **Glossary and Terms**

Definitions of key auto care industry terms

## **NAICS Definitions**

Definitions for auto care-related North American Industry Classification System (NAICS) codes

# Glossary and Terms

**Abrasives:** Substances used to wear away a surface by friction.

**Accessories:** Comfort, convenience and safety products not essential to the performance of a vehicle such as audio, security products, floor mats and seat covers.

**Additives:** Chemicals that are added to the engine, cooling system, air conditioning system or transmission to maintain or enhance performance.

**Appearance Products:** Chemicals and accessories that enhance the appearance of a vehicle, such as waxes, polishes, protectants and upholstery cleaners.

**Auto Care Industry:** The maintenance, repair, parts, accessories, chemicals and fluids for vehicles after their original sale. This term often refers only to the auto care for cars and light trucks.

**Auto Care Industry Distribution Segment:** Companies that provide repair and maintenance products for passenger cars and light trucks.

**Auto Electric Segment:** Businesses specializing in electrical and lighting products for commercial vehicles.

**Auto Parts Stores:** Establishments where automotive products comprise more than 50 percent of total inventory and where retail sales comprise more than 50 percent of total sales.

**Body Shops:** Firms whose primary activity is motor vehicle collision repair.

**Buying Group:** A group of businesses that buy together in large quantities to get discounted prices.

**CAFE:** Corporate Average Fuel Economy. These standards set requirements on automakers for improving the average fuel economy for new light-duty vehicles.

**Captive Jobbers:** Jobbers that are owned, in part or in full, by their primary supply warehouse.

**Car Dealers:** Establishments that primarily sell new or used automobiles. They usually have a service and parts department either on premises or at another location.

**Carrier:** A person, partnership or corporation engaged in the business of transporting goods.

**Category Management:** A business discipline where vendors and retailers work together in the management of product categories in order to streamline operations and increase sales.

**Chain Stores:** Retail establishments, which are part of an organization operating four or more similar types of stores.

**Convenience Stores:** Compact, self-service retail stores that are open long hours and carry a limited line of brands and sizes, possibly including gasoline. Examples include 7-Eleven and Circle K.

**Core:** The rebuildable portion of automotive components, such as starters, alternators and carburetors.

**Counterman:** Sales person at a retail or jobber outlet responsible for looking up parts and handling customer needs.

**Department Stores:** Large mass merchandise retail stores, which carry a wide variety of products. Many department stores include automotive service departments. Examples include Sears, JC Penney, Macy's and Bloomingdale's.

**DIFM:** Do-It-For-Me. Refers to when consumers use professionals to perform the maintenance and repair work needed on their vehicles.

**DIY:** Do-It-Yourself. Refers to when consumers perform the maintenance and repair work needed on their vehicles.

**Discount Stores:** Retail establishments that meet the requirements of a department store, but have lower cost structures and typically sell at lower prices than conventional department stores.

**Distribution Centers (DC):** Firms with products distributed primarily to other distributors, most of which are either of common ownership with the DC or substantially related to the DC in the distribution channel.

**Drug Stores:** Establishments that primarily sell pharmaceutical and other health care products. Many sell a limited or intermediate line of automotive products. Examples include CVS, Walgreens and Eckerd.

**Fleet Shops:** Vehicle service shops owned by a company not principally engaged in the business of vehicle service but which operate shops for the primary purpose of maintaining their own vehicle fleet.

# Glossary and Terms

**FOB:** Free on Board. Term designating that the purchaser pays freight from the time the shipment is placed aboard a truck or train. Legal title for the goods passed to the buyer at this time and location.

**General Repair Garages:** Establishments engaged in automotive repair that do not specialize in one facet of repair, such as transmissions or exhausts.

**Grocery Stores:** Establishments that primarily sell food for home preparation and consumption. Many also sell non-edible grocery items and a limited range of automotive products. Examples include Safeway, Kroger and Ralph's.

**Gross Combination Weight (GCW):** The total weight of tractor-trailer combinations, including the trucks, trailers and payload.

**Gross Vehicle Weight (GVW):** The total weight of the loaded vehicle, including chassis, body and payload.

**Hard Parts:** Solid engine parts, such as crankshafts, pistons and flywheels.

**Hardware Stores:** Establishments that sell a variety of basic hardware lines such as tools, paint, glass, housewares, appliances and cutlery. May also sell automotive products. Examples include Ace and True Value.

**Headlining:** Fabric or vinyl upholstery on the interior of the roof of a vehicle.

**Heavy Duty Auto Care Industry:** The portion of the aftermarket that deals with the maintenance, repair and aftermarket products for commercial, industrial and agricultural vehicles after their original sale.

**Heavy Duty Distributors:** Firms primarily involved in maintaining and selling an inventory of products specifically intended for the maintenance and repair of Class 3 through Class 8 commercial vehicles.

**Heavy Duty Parts:** Parts for large commercial trucks and commercial vehicles.

**Heavy Duty Vehicles:** Vehicles classed by Gross Vehicle Weight as follows:

**Class 7:** 26,001 - 33,000 lbs. (home fuel, refuse, tow, city transit bus, furniture, medium conventional, cabover)

**Class 8:** 33,001 lbs. and over (fuel, dump, cement, refrigerated van, intercity tour bus, fire engine, heavy conventional, cabover sleeper)

**Home Improvement Centers:** Establishments that carry a wide range of home products, such as hardware, lumber, building materials, garden supplies, plumbing and electrical supplies. May also carry automotive products. Examples include Home Depot and Lowe's.

**Independent Service Providers:** Vehicle service shops that do not have a significant relationship with either vehicle manufacturers or petroleum marketers.

**Independent Jobbers:** Jobbers that are not owned, in part or in full, by a warehouse.

**Independent Truck Repair Facilities:** Firms that are primarily involved in the diagnosis, repair, maintenance or accessorization of commercial motor vehicles and have no significant relationship to vehicle manufacturers or to petroleum marketers.

**Inventory Turns/Turnover:** The number of times inventory is replenished within a particular time, calculated by dividing the cost of goods sold by the average inventory for the period.

**Jobbers:** Firms that sell more than 50 percent of their products to repair shops and more than 50 percent of their purchases are from distributors.

**Jobber/Retailer:** Wholesalers who also sell parts, chemicals and accessories to retail customers. Retail sales account for more than 50 percent of a jobber/retailer's total sales.

**Leased Operators:** Owner operators that lease themselves and their vehicles to trucking companies.

**Light Duty Vehicles:** Vehicles classed by Gross Vehicle Weight (GVW) as follows:

**Class 1:** 0 - 6,000 lbs. (passenger car, minivan, utility van, multipurpose/sport utility vehicle, compact and full-size pickup)

**Class 2:** 6,001 - 10,000 lbs. (minivan, utility van, step van, crew cab pickup, full-size pickup, mini-bus)

**Class 3:** 10,001 - 14,000 lbs. (mini-bus, walk-in, city delivery)

**Manufacturers:** Firms that are the principal owners of the brand and trade names of more than 50 percent of the products sold by their companies.

**Manufacturers' Representatives:** Independent sales and marketing agencies which represent, by contract, the products of multiple manufacturers in the aftermarket.

# Glossary and Terms

**Markup:** The difference between the cost of the merchandise and its initial retail price.

**Mass Market:** The general public.

**Mass Market Retailers:** General merchandise retailers including department stores, discount stores, grocery stores, drug stores, hardware stores, variety stores, home centers, warehouse clubs, appliance stores, catalog showrooms, lawn and garden stores. Some use “mass market” to refer to discount stores only.

**Medium Duty Vehicles:** Vehicles classed by Gross Vehicle Weight as follows:

**Class 4:** 14,001 - 16,000 lbs. (conventional van, large walk-in, landscaping/utility, city delivery)

**Class 5:** 16,001 - 19,500 lbs. (large walk-in, city delivery, bucket)

**Class 6:** 19,501 - 26,000 lbs. (rack, single-axle van, beverage, stake body, school bus)

**Mobile Repair Units:** Firms primarily involved in the diagnosis, repair or maintenance of motor vehicles and whose activities are predominantly conducted at a site not owned or leased by the firms.

**Motor Vehicle Auto Care Industry:** The entire auto care industry, including all products and services for light, medium and heavy duty vehicles after their original sale.

**Mobile Tool Distributors:** Distribution firms selling primarily tools and equipment with sales activity primarily occurring at the site of the buyer from inventory available on the distributor's vehicle.

**NAICS Codes:** North American Industry Classification System codes. The standard statistical classification codes underlying all establishment-based Federal economic statistics classified by industry for the United States, Mexico and Canada.

**New Car Dealers:** Firms primarily involved in the retailing of new, personal-use motor vehicles, which also provide service for those vehicles after the sale.

**NHTSA:** National Highway Traffic Safety Administration. The agency that develops and administers educational, engineering and enforcement programs for safe vehicle use and cost-effective highway travel.

**OE:** Original Equipment. Parts and components supplied to manufacturers for motor vehicle production.

**OEM:** Original Equipment Manufacturers. Companies that supply parts and components for the production of motor vehicles.

**OSHA:** Occupational Safety and Health Administration. The regulatory and enforcement agency for workplace safety and health.

**Owner Operator:** Someone who owns one or more commercial trucks and personally drives at least one of them. If they own more than one vehicle they are also known as small fleet owners.

**Paint, Body and Equipment Specialists (PBES) Segment:** Specialists in providing vehicle refinishing products and supplies to the collision repair industry.

**Parc:** European terminology used to describe the total number of registered vehicles within a certain geographic region.

**Performance Products:** Products that enhance the speed and handling of a motor vehicle.

**Program Group:** A group of businesses purchasing, selling and marketing under a common banner.

**Quick Lubes:** Service establishments specializing in providing fast oil changes. May also offer other automotive services.

**Remanufacturer:** A rebuilder of motor vehicle engines and hard parts.

**Replacement Rates:** The percentage of vehicles in operation for which a particular component or service job was purchased during a particular year.

**Service Stations:** Establishments, which may or may not sell products over the counter, for which gasoline accounts for more than 50 percent of total sales. Examples include BP, Shell and Exxon.

**SIC Codes:** Standard Industrial Classification codes. The standard statistical classification codes underlying all establishment-based Federal economic statistics classified by industry. Largely replaced by the NAICS Codes system in 1997.

**SKU:** Stock Keeping Unit. Refers to each single item carried by a retailer. Every color, style and item having its own vendor or vendee number has its own SKU.

# Glossary and Terms

**Specialty Repair Shops:** Establishments specializing in one facet of automotive repair, such as transmission, ignition or exhaust. The outlet's specialty accounts for more than 50 percent of total sales receipts.

**Specialty Stores:** Retail outlets, such as auto parts stores, that restrict its appeal to a specific type of merchandise. These outlets generally offer wider assortments in a narrower range than department, discount or variety stores.

**Speed Shops:** Specialty stores selling high-performance automotive products.

**Three-Step Distribution:** Traditional aftermarket distribution process where products flow from the manufacturer to the warehouse distributor to the jobber to the service outlet.

**Tier One Suppliers:** Automotive parts manufacturers that supply final equipment directly to vehicle manufacturers. Increasingly, tier one suppliers are becoming producers of major subassemblies and modular components that can be installed into a vehicle as a unit, such as a complete drivetrain.

**Tier Two Suppliers:** Manufacturers that produce components for Tier One suppliers.

**Tier Three Suppliers:** Manufacturers that supply raw materials used in the production of components.

**Tire Dealers:** Stores that generate more than 50 percent of their sales from automotive tires.

**Tool and Equipment Segment:** Specialists in providing the tools and equipment needed to perform repair and maintenance of motor vehicles.

**Transplants:** Cars and trucks manufactured in the United States with a foreign nameplate.

**Trim Segment:** Companies that manufacture or distribute interior and exterior fabrics and the associated hardware and products used in the repair or restoration of motor vehicles, boats and aircrafts.

**Trim Shops:** Firms involved in the repair or accessorization of products primarily from the trim goods category, such as carpet, vinyl, leather, fabrics, thread and zippers.

**Truck Dealers:** Firms primarily involved in the retailing of new commercial motor vehicles. These firms also provide service for those vehicles after the sale.

**Truck Stops:** Firms primarily involved in the distribution of petroleum products and the diagnosis, repair or maintenance of commercially-operated motor vehicles.

**Two-Step Distribution:** Distribution process where products flow from the manufacturer to the warehouse distributor to the service outlet directly, eliminating the jobber.

**Two-Step Warehouse Distributors:** Firms that sell more than 50 percent of their products to repair shops and more than 50 percent of their purchases are from manufacturers.

**Universal Product Code (UPC):** Also known as bar code. Numbers printed on product package that can be electronically scanned for information such as brand, manufacturer and price.

**Variety Stores:** Establishments that sell a variety of goods at low prices, such as apparel, accessories, gift items, stationery, toiletries, light hardware, toys and candy (e.g., Ben Franklin).

**Vehicle Class:** A method of grouping vehicles according to their Gross Vehicle Weight. Classes range from 1 to 8. See Light Duty Vehicles, Medium Duty Vehicles and Heavy Duty Vehicles for examples.

**Wagon Jobber:** A distributor operating trucks stocked with fast-moving parts and tools, usually calling on service stations, garages and car dealers.

**Warehouse Clubs:** Self-service establishments selling a variety of products, generally in bulk sizes. Membership fees are typically required.

**Warehouse Distributors:** Firms that sell more than 50 percent of their products to automotive jobbers or retailers.

**Wholesaler/Jobber:** Firms that sell more than 50 percent of their products to repair shops and more than 50 percent of their purchases are from distributors.



# NAICS Definitions

**NAICS 326211 - Tire Manufacturing (except Retreading):**

Establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber.

**NAICS 33631 - Motor Vehicle Gasoline Engine and Engine Parts Manufacturing:**

Establishments primarily engaged in manufacturing and/or rebuilding motor vehicle gasoline engines and engine parts, whether or not for vehicular use.

**NAICS 33632 - Motor Vehicle Electrical and Electronic Equipment Manufacturing:**

Establishments primarily engaged in manufacturing and/or rebuilding motor vehicle electrical and electronic equipment for all types of transportation equipment (e.g., aircraft, automobiles, trains, ships).

**NAICS 336330 - Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing:**

Establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

**NAICS 336340 - Motor Vehicle Brake System Manufacturing:**

Establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

**NAICS 336350 - Motor Vehicle Transmission and Power Train Parts Manufacturing:**

Establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

**NAICS 336360 - Motor Vehicle Seating and Interior Trim Manufacturing:**

Establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts and interior trimmings.

**NAICS 336370 - Motor Vehicle Metal Stamping:**

Establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim and molding.

**NAICS 336391 - Motor Vehicle Air-Conditioning Manufacturing:**

Establishments primarily engaged in manufacturing air-conditioning systems and compressors for motor vehicles.

**NAICS 423120 - Motor Vehicle Supplies and New Parts Merchant Wholesalers:**

Establishments primarily engaged in the merchant wholesale distribution of motor vehicle supplies, accessories, tools, equipment and new motor vehicle parts (except new tires and tubes).

**NAICS 423130 - Tire and Tube Merchant Wholesalers:**

Establishments primarily engaged in the merchant wholesale distribution of new and/or used tires and tubes for passenger and commercial vehicles.

**NAICS 441110 - New Car Dealers:** Establishments primarily engaged in (1) retailing new automobiles and light trucks or (2) retailing these new vehicles in combination with activities, such as repair services, retailing used cars and selling replacement parts and accessories.

**NAICS 441310 - Automotive Parts and Accessories Stores:**

Establishments primarily engaged in retailing new, used and/or rebuilt automotive parts and accessories.

**NAICS 441320 - Tire Dealers:** Establishments primarily engaged in retailing new and/or used tires and tubes, or retailing new tires in combination with automotive repair services.

**NAICS 447110 - Gasoline Stations with Convenience Stores:**

Establishments engaged in retailing automotive fuels in combination with convenience store or food mart items, either in a convenience store setting or a gasoline station setting.

**NAICS 447190 - Other Gasoline Stations:** Establishments, without convenience stores, primarily engaged in retailing automotive fuels possibly in combination with activities, such as providing repair services, selling automotive oils, replacement parts and accessories and/or providing food services.

**NAICS 811111 - General Automotive Repair:**

Establishments primarily engaged in providing (1) a wide range of mechanical and electrical repair and maintenance services for automotive vehicles or (2) engine repair and replacement.

**NAICS 811112 - Automotive Exhaust System Repair:**

Establishments primarily engaged in replacing or repairing exhaust systems of automotive vehicles.

**NAICS 811113 - Automotive Transmission Repair:**

Establishments primarily engaged in replacing or repairing transmissions of automotive vehicles.

**NAICS 811121 - Automotive Body, Paint, and Interior Repair and Maintenance:**

Establishments primarily engaged in repairing, customizing and/or painting automotive vehicles and trailer bodies.

**NAICS 811191 - Automotive Oil Change and Lubrication Shops:**

Establishments primarily engaged in changing motor oil and lubricating the chassis of automotive vehicles.





# Auto Care Data Resources

in this section

## **Auto Care Data Resources**

A listing of primary sources of auto care data

# Auto Care Data Resources

The following pages list organizations that are primary sources of auto care-related data. Organizations that collect information in a secondary manner from other organizations can also be valuable resources, but are not included in these lists. In addition, many state and local associations also provide useful data and information on the motor vehicle aftermarket, but are too numerous to list in this publication.

## DATA & RESEARCH FIRMS

**Auto Strategies International:** A market research firm providing motor vehicle statistics on all 212 countries for international business planning.

autostrat.com | 216-581-6323

**DesRosiers Automotive Consultants:** A consumer market research firm that specializes in the Canadian automotive sector.

desrosiers.ca | 905-881-0400

**Ducker, Findlay, Swoboda & Associates, LLC:** A consulting and business solutions company specializing in the aftermarket industry.

www.dfsaftermarket.com | 877-536-2100

**Hanover Research:** Provides high-quality research and analytics through cost-effective model.

hanoverresearch.com | 202-559-0050

**IHS Markit:** A global leader in economic and financial analysis, forecasting and market intelligence.

ihsmarkit.com | 800-933-3374

**IMR Inc.:** A research firm providing replacement rate data for more than 100 motor vehicle parts and services, released quarterly.

automotiveresearch.com | 800-654-1079

**Integrate Data Facts:** A Michigan-based research and business consultancy dedicated to producing business intelligence and guiding decision-making for the automotive and other industries.

integratedatafacts.com | 248-608-6869

**J. D. Power & Associates:** A global marketing information services firm that provides a variety of customer-based information.

jdpower.com | 805-418-8000

**Jefferies, LLC:** A global, full-service investment banking firm with a team dedicated exclusively to the automotive aftermarket. Clients are our #1 priority—for over 50 years, our clients' success has driven our success.

jefferies.com | 617-342-7863

**Kiplinger:** An organization offering financial and business forecasting advice.

kiplinger.com | 800-544-0155

**Lang Marketing Resources, Inc.:** A marketing intelligence and consulting firm, specializing in the U.S. car and light truck aftermarket.

langmarketing.com | 201-652-5220

**M-Vision Insights, LLC:** Practical research, planning and regulatory-affairs consulting solutions for growing small to medium aftermarket companies and associations.

m-visioninsights.com | 203-364-0287

**MacKay & Co.:** A specialized management and market research consulting firm focusing heavily on the heavy duty truck industry.

mackayco.com | 630-916-6110

**Shanghai Auto Parts T&C (SAPTC):** Connects automotive companies and entrepreneurs to opportunities in China and North America

saptc.co | 248-566-6504

**Solidiance:** An Asian-based market growth strategy and operational consultancy with 13 offices across 12 countries in Asia and the Middle-East

solidiance.com | 919-855-5437

**The NPD Group:** A consulting firm providing consumer research and point-of-sale tracking in the automotive sector.

npd.com | 703-376-6200

**Technomic Asia:** A strategic consultancy firm whose mission is to assist globally-expanding companies to build their Asian businesses through high quality market strategy and implementation assistance.

technomicasia.com | 919-855-5437

**Tompkins Associates:** A company that designs and integrates global end-to-end solutions for companies that embrace supply chain excellence.

tompkinsinc.com | 800-789-1257

**The Wall Street Journal:** A leading provider of global business news and information services.

wsj.com | 212-416-2000

# Auto Care Data Resources

## ASSOCIATIONS

**Alliance of Automotive Service Providers (AASP):** A coalition of associations that serves over 7,500 members of the automotive service industry.

[autoserviceproviders.com](http://autoserviceproviders.com) | 612-270-6696

**American Automobile Association (AAA):** A federation of motor clubs providing specialized services including financial tracking and industry monitoring.

[aaa.com](http://aaa.com) | 407-444-7000

**Auto Care Association:** The only trade association representing the entire supply chain of the independent aftermarket.

[autocare.org](http://autocare.org) | 301-654-6664

**Automotive Aftermarket Suppliers Association (AASA):**

An aftermarket association focusing on key industry issues affecting aftermarket parts manufacturers.

[aftermarketsuppliers.org](http://aftermarketsuppliers.org) | 919-549-4800

**Automotive Industries Association of Canada**

**(AIA Canada):** An automotive association providing a wide variety of research on the Canadian aftermarket.

[aiacanada.com](http://aiacanada.com) | 800-808-2920

**Automotive Service Association (ASA):** A repair shop association with data on topics such as business management, business statistics and industry surveys.

[asashop.org](http://asashop.org) | 800-272-7467

**Motor & Equipment Manufacturers Association (MEMA):**

An automotive association providing a variety of research for parts and components manufacturers.

[mema.org](http://mema.org) | 919-549-4800

**Original Equipment Suppliers Organization (OESA):** An automotive association providing industry information and analysis for original equipment suppliers.

[oesa.org](http://oesa.org) | 248-952-6401

**National Automobile Dealers Association (NADA):** An automobile dealer association providing data on new car and truck dealerships and sales.

[nada.org](http://nada.org) | 703-821-7000

**Specialty Equipment Market Association (SEMA):** A specialty performance association that provides a wide variety of research on the accessories aftermarket.

[sema.org](http://sema.org) | 909-396-0289

## TRADE PRESS

**Advanstar Motor Vehicle Group:** Publisher of industry magazines such as Aftermarket Business, Motor Age and Auto Body Repair News.

[advanstar.com](http://advanstar.com) | 440-243-8100

**Automotive News:** A publication providing news and data to the automotive industry.

[autonews.com](http://autonews.com) | 888-446-1422

**Babcox Media:** Publisher of industry magazines such as Aftermarket News, Counterman and Body Shop Business

[babcox.com](http://babcox.com) | 330-670-1234

**Modern Tire Dealer:** A magazine serving independent tire dealers that sell and service tires.

[mtdealer.com](http://mtdealer.com) | 330-867-4401

**Ward's Automotive:** An automotive industry publisher providing news, data and analysis through subscriptions and customized research.

[wardsauto.com](http://wardsauto.com) | 248-799-2642

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## HEAVY DUTY TRADE PRESS

**Fleet Equipment Magazine:**

[fleetequipmentmag.com](http://fleetequipmentmag.com)

**Fleet Owner:**

[fleetowner.com](http://fleetowner.com)

**Truck Parts & Service Magazine:**

[truckpartsandservice.com/tps.htm](http://truckpartsandservice.com/tps.htm)

**Trucking Times:**

[truckingtimes.com](http://truckingtimes.com)

# Auto Care Data Resources

## U.S. GOVERNMENT AGENCIES

**Bureau of Economic Analysis (BEA):** An agency of the Department of Commerce that produces economic accounts statistics on the performance of the nation's economy.  
bea.gov | 202-606-9900

**Bureau of Labor Statistics (BLS):** The principal fact-finding agency for the federal government in the field of labor economics and statistics.  
bls.gov | 202-691-5200

**Bureau of Transportation Statistics:** An agency of the Department of Transportation that provides data collection, analysis and reporting to ensure the most cost-effective use of transportation-monitoring resources.  
bts.gov | 800-853-1351

**Census Bureau:** An agency of the Department of Commerce that serves as the source of statistical data about the nation's people and economy.  
census.gov | 301-763-4636

**Central Intelligence Agency (CIA):** The CIA engages in research, development, and deployment of high-leverage technology for intelligence purposes. As a separate agency, CIA serves as an independent source of analysis on topics of concern to ensure that the intelligence consumer receives the best intelligence possible.  
cia.gov | 703-482-0623

**Federal Highway Administration (FHWA):** An agency of the Department of Transportation charged with the broad responsibility of ensuring that America's roads and highways continue to be the safest and most technologically up-to-date  
fhwa.dot.gov | 202-366-9393

**Federal Reserve:** The Federal Reserve, which is the central bank of the United States, provides various financial services to the U.S. government, public, financial institutions and foreign official institutions, primarily geared toward operating the nation's payments system.  
federalreserve.gov | 202-452-3000

**International Trade Administration:** An agency of the Department of Commerce assisting U.S. businesses in the global marketplace by providing support in the following areas: commercial service, manufacturing and services, market access and compliance and import administration.  
ita.doc.gov | 800-872-8723

**National Highway Traffic Safety Administration (NHTSA):** An agency of the Department of Transportation that conducts research on driver behavior and traffic safety to develop the most efficient and effective means of bringing about safety improvements for motor vehicles and motor vehicle equipment  
nhtsa.dot.gov | 888-327-4236

**Securities and Exchange Commission (SEC):** A federal agency that requires public companies to disclose meaningful financial and other information to the public, which provides a common pool of knowledge for all investors to judge a company's securities.  
sec.gov | 202-942-8088

**U.S. Commercial Service:** An independent federal agency helping U.S. companies find new international business partners in worldwide markets, as well as assisting foreign companies in locating U.S. suppliers of products and services.  
buyusa.gov | 202-482-4767

**U.S. International Trade Commission (USITC):** An independent federal agency supporting policymakers through economic analysis and research on the global competitiveness of U.S. industries through the U.S. Harmonized Tariff Schedule (HTS).  
usitc.gov | 202-205-2000





# Auto Care Association Market Intelligence

in this section

## **Auto Care Association Market Intelligence**

A catalog of Auto Care Association programs and publications with a brief description, price and publication date for each item. In broad terms the program consists of the following:

### **Annual Publications**

- *Digital Auto Care Factbook*
- *Digital Auto Care Factbook & Lang Annual*
- *Purchasing Trends Study*
- *Digital Collision Repair Trends*

### **Special Projects**

- Membership Surveys
- Be Car Care Aware
- Interactive Demand Index

### **Weekly and Monthly Updates for *Auto Care Weekly Insider* and Social Media Applications**

- Northwood Connection
- *Key Issues Impact Survey*
- *Jefferies Weekly Global Automotive Aftermarket Report*

### **Research Requests**

- On-Demand Consulting

### **Committee Activities**

- Tool and Equipment Committee
- Market Intelligence Committee

# Auto Care Association Market Intelligence

TO ORDER AUTO CARE ASSOCIATION PUBLICATIONS, PLEASE CALL 301-654-6664 OR VISIT [WWW.AUTOCARE.ORG](http://WWW.AUTOCARE.ORG).

the auto care association market intelligence program consists of the following features.

## ANNUAL PUBLICATIONS

The **Digital Auto Care Factbook**: Distributed to members at no charge. The **Digital Auto Care Factbook and Lang Annual** is a separate publication available for purchase. Each is updated annually and available electronically in June of each year. Separate sales prices have been established for members and non-members. Supplemental print copies are also available in bulk quantities.

The **Purchasing Trends Study**: Survey-based research directed by the Tool & Equipment Committee. The publication is available electronically.

The **Digital Collision Repair Trends** includes updates on all the traditional data reported previously. This publication is available electronically to Auto Care Association members.

## SPECIAL PROJECTS

**Membership Surveys**: Custom surveys on a variety of topics.

**Be Car Care Aware**: Check Lane Survey analysis provided twice each year.

**Interactive Demand Index**: The Auto Care Association's new Interactive Demand Index provides an interactive way to view select aftermarket industry and product category performance data that tracks the demand of products and category trend direction in the U.S. to inform strategic decision-making.

With just a few clicks, users can view custom date ranges of data, drill down on points just by hovering with the cursor, overlay categories or indicators and export data to compare with their own results.

## WEEKLY AND MONTHLY UPDATES FOR AUTO CARE WEEKLY INSIDER AND SOCIAL MEDIA APPLICATIONS

The **Northwood Connection**: Includes monthly updates on the Industry Indicators Report (IIR) and the Business Confidence Index (BCI). The BCI is a member-based survey and includes interpretive analysis by Dr. Timothy G. Nash. These materials are posted on the Auto Care Association website at [www.autocare.org](http://www.autocare.org) and are password protected.

The **Key Issues Impact Survey**: Member-based research updated quarterly with new rankings based on Auto Care Association member input. Survey results are available through Auto Care Insider and posted on the Auto Care Association website.

The **Jefferies Weekly Global Automotive Aftermarket Report** is the result of collaboration between Auto Care Association and Jefferies. This report is distributed weekly in Auto Care Weekly Insider.

## RESEARCH REQUESTS

**On-Demand Consulting**: Ongoing phone/email research service available Monday through Friday to anyone seeking information about the U.S. auto care industry.

## COMMITTEE ACTIVITIES

The **Tool and Equipment Committee** meets during the Auto Care Association Spring and Fall Leadership Days to brainstorm and plan their research needs. The committee drafted a PIES whitepaper written specifically for use by the Tool and Equipment community.

The **Market Intelligence Committee** meets during the Auto Care Association Spring and Fall Leadership Days to discuss trends and plan their research needs. Current projects include (1) Online Service Providers Directory, (2) Global Aftermarket Estimate and (3) Average Repair Cost Analysis. All three initiatives are being coordinated with assistance from Hanover Research.

This program is enhanced through directional input from the Auto Care Association Market Intelligence Committee. If you are interested in getting involved, please call 301-654-6664 for Ron Rossi, director, market intelligence or email [ron.rossi@autocare.org](mailto:ron.rossi@autocare.org)

To order Auto Care Association publications, please call 301-654-6664 or visit [www.autocare.org/market-intelligence](http://www.autocare.org/market-intelligence).



# Auto Care Association Market Intelligence

TO ORDER AUTO CARE ASSOCIATION PUBLICATIONS, PLEASE CALL 301-654-6664 OR VISIT [WWW.AUTOCARE.ORG](http://WWW.AUTOCARE.ORG).

## current publications

### 2017 CHINA MARKET REPORT



This report is a comprehensive assessment covering many of the major aspects of the developing China automotive aftermarket. In collaboration with Solidiance, the China Market Report presents dynamic opportunities for companies looking to expand. While China's automotive industry has begun to slow in terms of new vehicle sales after over a decade of blistering growth, the parts and repair aftermarket continues to expand more significantly as a result of a larger and older automotive parc. The strong vehicle growth over the last 10 years has created an increasingly sizeable and diverse light passenger vehicle parc which has now reached approximately 139 million vehicles.

• ITEM #75068 • RELEASE DATE: 2017 • MEMBER PRICE: \$2,100 • NON-MEMBER PRICE: \$3,100

### 2017 MEXICO MARKET REPORT



An Assessment of Mexico's Aftermarket is also a first report resulting from the partnership between Integrate Data Facts (IDF), LLC and the Auto Care Association. The Mexican market has become more important due to the North American Free Trade Agreement (NAFTA) which helped stimulate growth in both the number of vehicles on the road and in the miles driven in Mexico. This report provides valuable insights on a broad spectrum of relevant topics including basic country facts, manufacturing employment, auto parts manufacturing, new vehicle sales, distribution, age of vehicles and VIO, miles traveled, and used imports vs. new vehicle VIO comparisons.

• ITEM #75069 • RELEASE DATE: 2017 • MEMBER PRICE: \$2,100 • NON-MEMBER PRICE: \$3,100

### 2019 DIGITAL AUTO CARE FACTBOOK (AVAILABLE NOW)



New value-added content in the 28th edition includes an extended industry forecast through 2021 by IHS Markit. New and expanded consumer data by IMR, an updated Jefferies Global Automotive Aftermarket Review and updated global vehicle registration summary by IHS Markit are included. New insights on the global market including insights on the Chinese auto care industry by Solidiance and on the Mexico market by Integrate Data Facts (IDF), LLC are featured. "As a member, I personally used the Factbook extensively and can attest that it is an invaluable tool in planning your business now and into the future," said Bill Hanvey, president and CEO, Auto Care Association.

• ITEM #75075 • RELEASE DATE: 2018 • MEMBER PRICE: FREE FOR MEMBERS • NON-MEMBER PRICE: \$1,950

### 2019 DIGITAL AUTO CARE FACTBOOK & LANG ANNUAL (AVAILABLE NOW)



This report is the result of nearly a decade of collaborative effort between Lang Marketing and the Auto Care Association. The Lang Annual section contains sales volume analysis of 80 key products and service market product volume by major type of service outlet. DIY product volume by major type of retail outlet, number of jobbers in the U.S. and by geographic area, distribution analysis by five major channels, changes in vehicle mix, bay population by major service outlet groups, analysis of growth by major auto care segments and forecasts of key auto care trends are included.

• ITEM #75076 • RELEASE DATE: 2018 • MEMBER PRICE: \$995 • NON-MEMBER PRICE: \$2,995

### 2018 DIGITAL COLLISION REPAIR TRENDS: INDUSTRY STATISTICS & ANALYSIS



This study provides a summary of market statistics on the collision repair industry, combining the latest available industry data from many sources including original Auto Care Association research, government and independent research supplier databases. The study comprehensively analyzes the size and scope of the collision repair industry in the United States, while also reviewing key industry trends in Canada.

• ITEM #75073 • RELEASE DATE: 2018 • MEMBER PRICE: \$225 • NON-MEMBER PRICE: \$450

# Auto Care Association Market Intelligence

TO ORDER AUTO CARE ASSOCIATION PUBLICATIONS, PLEASE CALL 301-654-6664 OR VISIT [WWW.AUTOCARE.ORG](http://WWW.AUTOCARE.ORG).

coming soon

## DISRUPTIVE TRENDS SHAPING THE FUTURE OF THE AFTERMARKET: E-COMMERCE AND STRATEGY



This new arsenal of original research provides a deep dive into how DIY and DIFM customers shop and what factors determine their behaviors. It details e-commerce penetration by product category, implications and potential strategies, as well as case studies from similar industries that have innovated and grew their businesses with faced with a similar situation.

- RELEASE DATE: SUMMER 2018
- PRICING: COMING SOON
- MORE INFORMATION: [AUTOCARE.ORG/E-COMMERCE-STRATEGY/](http://AUTOCARE.ORG/E-COMMERCE-STRATEGY/)

## PURCHASING TRENDS STUDY - TOOLS AND EQUIPMENT 2018



This study contains a detailed analysis of current and future purchasing decisions of professionals who utilize shop tools and equipment for automotive repair.

- ITEM #75074
- RELEASE DATE: 2018
- MEMBER PRICE: \$250
- NON-MEMBER PRICE: \$750

archived publications



## E-TAILING IN THE AUTOMOTIVE AFTERMARKET

E-tailing is the fastest growing retail sector in the automotive aftermarket, and becoming a significant revenue stream for auto parts sales, but little solid data exists on the size and makeup of this channel. E-tailing refers to parts sold via publicly accessible websites to DIYers and service professionals. This research study, which measures the online retail market for sales of aftermarket replacement parts and accessories, serve as the foundation for the Auto Care Association to provide a unified estimate of online sales within the auto care industry.

- ITEM #75054
- RELEASE DATE: 2014
- MEMBER PRICE: \$1,750
- NON-MEMBER PRICE: \$2,750



## AFTERMARKET FASTFORWARD 2012

The Aftermarket FastForward 2012 publication provides a comprehensive look at the present and future car and light truck aftermarket industry. This 321-page ground breaking report places a special emphasis on market changes from 2006 through 2012. Data and information regarding aftermarket size and segments, domestic and foreign vehicle aftermarkets, and distribution channel analysis are just a few of the many topics covered in this report.

- ITEM #75016
- RELEASE DATE: 2008
- MEMBER PRICE: \$2,290
- NON-MEMBER PRICE: \$3,290

# Auto Care Association Market Intelligence

TO ORDER AUTO CARE ASSOCIATION PUBLICATIONS, PLEASE CALL 301-654-6664 OR VISIT [WWW.AUTOCARE.ORG](http://WWW.AUTOCARE.ORG).

## archived publications

### CONSUMER RESEARCH STUDY 2007



The Consumer Research Study summarizes the findings of a survey conducted by Opinion Research Corporation about current consumer interest and motivational shifts regarding vehicle maintenance. This study includes information on consumer attitudes toward driving behavior, gasoline prices, as well as vehicle upkeep and repair.

• ITEM #75015 • RELEASE DATE: 2007 • MEMBER PRICE: \$125 • NON-MEMBER PRICE: \$250

### EMPLOYEE COMPENSATION SURVEY 2008



The most comprehensive guide to understanding compensation, incentive and benefit levels in aftermarket distribution, this in-depth publication is packed with information to help businesses size up their pay and benefit package with other distributors in their aftermarket segment or local area.

• ITEM #75021 • RELEASE DATE: 2008 • PARTICIPANT PRICE: FREE • MEMBER PRICE: \$125 • NON-MEMBER PRICE: \$250

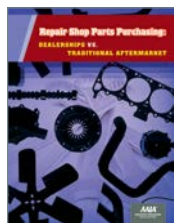
### PRODUCT PROFILES 2007/2008



This report provides in-depth information about critical market changes for 80 products focusing on 2007 and 2008 annual volume, service market and do-it-yourself market share, domestic and foreign vehicle use, and distribution channel sales. This 287-page report is an essential source for understanding product performance, market segment changes and distribution channel development.

• ITEM #75010 • RELEASE DATE: 2007 • MEMBER PRICE: \$2,150 • NON-MEMBER PRICE: \$3,150

### REPAIR SHOP PARTS PURCHASING: DEALERSHIPS VS. TRADITIONAL AFTERMARKET 2005



This study provides an overview of the factors that have influenced repair shops' parts purchasing behavior and a statistical analysis of their parts purchasing decisions. The report includes a detailed analysis of mechanical and electrical repair shops and collision repair shops' parts purchases from dealerships and traditional aftermarket sources.

### REPORT ON BRAKES FOR THE U.S. AUTOMOTIVE AFTERMARKET 2006



This report is designed to provide a clear understanding of market conditions in the automotive aftermarket in the category of brakes. The study contains key findings in a variety of areas, including the overall industry performance of leading suppliers, estimated market share, annual growth and the strength of national part brands.

# Auto Care Association Market Intelligence

TO ORDER AUTO CARE ASSOCIATION PUBLICATIONS, PLEASE CALL 301-654-6664 OR VISIT [WWW.AUTOCARE.ORG](http://WWW.AUTOCARE.ORG).

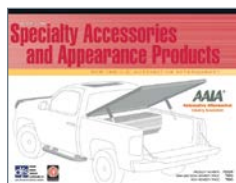
## archived publications

### REPORT ON FILTERS FOR THE U.S. AUTOMOTIVE AFTERMARKET 2006



This report is designed to provide a clear understanding of market conditions in the automotive aftermarket in the category of filters. The study contains key findings in a variety of areas, including the overall industry performance of leading suppliers, estimated market share, annual growth and the strength of national part brands.

### REPORT ON SPECIALTY ACCESSORIES AND APPEARANCE PRODUCTS 2008



This report examines the trends and market conditions influencing the specialty accessories and appearance products business in the U.S. automotive aftermarket. Four key product categories are examined in this report including interior trim and accessories, exterior accessories, restyling/installation and electronics.

• ITEM #75028 • RELEASE DATE: 2008 • MEMBER PRICE: \$450 • NON-MEMBER PRICE: \$650

### TELEMATICS PRIMER 2008



The rising use of vehicle telematics is a concern to many Aftermarket companies based on their assumption that original equipment manufacturers will use the technology to freeze aftermarket players out of the market. The question, then, is – “Will aftermarket companies have a role in the telematics future?” This 101-page report commissioned by AAIA, entitled Telematics Primer – The Aftermarket’s Role in the Telematics Future, answers that question.

• ITEM #75024 • RELEASE DATE: 2008 • MEMBER PRICE: FREE • NON-MEMBER PRICE: \$1,250

### VEHICLE REPAIR COST ANALYSIS: NEW CAR DEALERS VS. INDEPENDENT REPAIR SHOPS 2009



This publication is a comprehensive report in which specific vehicle repair and parts costs are compared. The findings reveal significant differences in repair costs between new car dealerships and independent repair shops, reinforcing the long-standing contention that independent repair shops are less costly and more convenient than new car dealerships.

• ITEM #75032 • RELEASE DATE: 2009 • MEMBER PRICE: FREE • NON-MEMBER PRICE: \$400



# Auto Care Association– Lang Market Comparison

in this section

## **Harmonization of Auto Care Industry Data**

A chart harmonizing Auto Care Association and Lang estimates of the total auto care industry



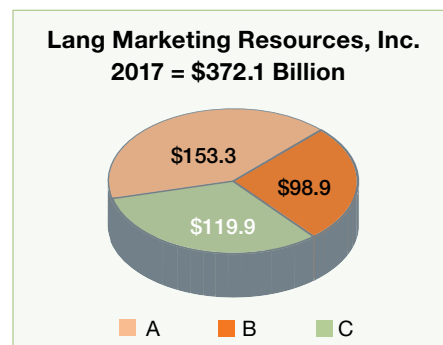
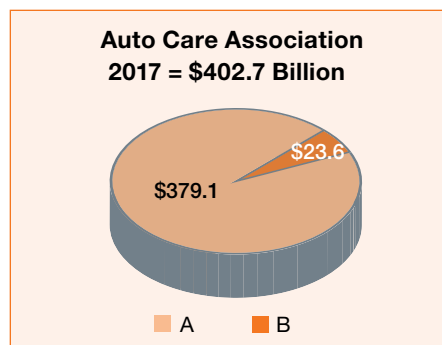
# Harmonization of Auto Care Industry Data

In this section, the Auto Care Association and Lang Marketing Resources, Inc. have harmonized their research data sets. While harmonization is not intended to be an exact science, it is possible to identify specific touch points which, when brought together, demonstrate the relative assessments of the market are within 8.5 percent of each other.

To achieve this estimate, it was important to recognize that public companies in the automotive industry are using information both from the Auto Care Association and Lang Marketing Resources, Inc. Efforts were made to preserve the basic "outline" of this information as it pertains to aftermarket size and scope so the financial community and public companies would not be confused by this harmonization effort. The details are presented below.

## Harmonization Analysis 2017

(in Billions of Dollars at User-Price)



Through exclusive rights granted by Lang Marketing Resources, Inc., the Auto Care Association is privileged to provide our newest publication titled the *Digital Auto Care Factbook & Lang Annual: 2018*. This report contains both the traditional *Auto Care Factbook 2018* and the entire *Lang Aftermarket Annual 2018* thus providing our readers with the broadest possible range of analysis not available elsewhere.

To order a copy of the *Digital Auto Care Factbook & Lang Annual: 2018* please contact Member Services at 301-654-6664 or [info@autocare.org](mailto:info@autocare.org)

## Harmonization Analysis 2012 - 2013 - 2014 - 2015 - 2016 - 2017\*

(In Billions of Dollars at User-Price)

| AUTO CARE AFTERMARKET ANALYSIS   |                |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
|  | 2012<br>Total  | 2013<br>Total  | 2014<br>Total  | 2015<br>Total  | 2016<br>Total  | 2017<br>Total  |
| <b>(A) Total Products and Services</b>   | <b>\$317.2</b> | <b>\$327.5</b> | <b>\$339.4</b> | <b>\$353.0</b> | <b>\$367.3</b> | <b>\$379.1</b> |
| <b>(B) Total Products and Purchased Services in Lang Data, but not in Auto Care Data</b>   | <b>\$21.2</b>  | <b>\$21.6</b>  | <b>\$22.2</b>  | <b>\$22.8</b>  | <b>\$23.2</b>  | <b>\$23.6</b>  |
| Other Automotive Products (Lang Analysis)  | \$13.2         | \$13.4         | \$13.7         | \$14.0         | \$14.2         | \$14.4         |
| Purchased Services for Other Automotive Products (Lang Analysis)                           | \$8.0          | \$8.2          | \$8.5          | \$8.8          | \$9.0          | \$9.2          |
| <b>Auto Care Products and Purchased Services Plus Market Segments Only Covered by Lang</b> | <b>\$338.4</b> | <b>\$349.1</b> | <b>\$361.6</b> | <b>\$375.8</b> | <b>\$390.5</b> | <b>\$402.7</b> |
| LANG AFTERMARKET ANALYSIS  |                |                |                |                |                |                |
| <b>(A) Lang Total Products</b>   | <b>\$135.1</b> | <b>\$138.5</b> | <b>\$142.9</b> | <b>\$147.4</b> | <b>\$150.1</b> | <b>\$153.3</b> |
| Light Vehicle Products   | \$95.6         | \$98.3         | \$101.6        | \$105.0        | \$106.9        | \$109.2        |
| Medium and Heavy Duty Truck Products   | \$26.3         | \$26.8         | \$27.6         | \$28.4         | \$29.0         | \$29.7         |
| Other Automotive Products  | \$13.2         | \$13.4         | \$13.7         | \$14.0         | \$14.2         | \$14.4         |
| <b>(B) Lang Total Purchased Services</b>   | <b>\$82.8</b>  | <b>\$85.5</b>  | <b>\$87.9</b>  | <b>\$91.8</b>  | <b>\$95.0</b>  | <b>\$98.9</b>  |
| Purchased Services for Light Vehicles  | \$60.6         | \$62.9         | \$65.6         | \$68.8         | \$71.7         | \$75.1         |
| Purchased Services for Other Applications  | \$22.2         | \$22.6         | \$22.3         | \$23.0         | \$23.3         | \$23.8         |
| <b>Total Products and Purchased Services</b>   | <b>\$217.9</b> | <b>\$224.0</b> | <b>\$230.8</b> | <b>\$239.2</b> | <b>\$245.1</b> | <b>\$252.2</b> |
| <b>(C) Total Products and Purchased Services in Auto Care Data but not in Lang Data</b>    | <b>\$105.3</b> | <b>\$106.2</b> | <b>\$107.6</b> | <b>\$109.5</b> | <b>\$115.8</b> | <b>\$119.9</b> |
| Specialty Equipment Products (less tires) Covered by Auto Care but not Lang                | \$16.8         | \$17.3         | \$17.9         | \$18.8         | \$19.8         | \$20.9         |
| Purchased Services for Specialty Equipment Products Covered by Auto Care but not Lang      | \$5.7          | \$5.8          | \$6.0          | \$6.2          | \$6.6          | \$6.9          |
| Tires for Light Vehicles Covered by Auto Care by not Lang                                  | \$29.8         | \$29.9         | \$29.7         | \$29.2         | \$29.7         | \$30.6         |
| Tires and Retreads for Medium/Heavy Trucks Covered by Auto Care but not Lang               | \$6.8          | \$6.3          | \$6.6          | \$6.4          | \$6.3          | \$6.8          |
| Collision Market Products and Purchased Service Covered by Auto Care but not Lang          | \$39.7         | \$40.1         | \$40.4         | \$41.6         | \$45.8         | \$46.6         |
| Trim Automotive Aftermarket Covered by Auto Care but not Lang                              | \$6.5          | \$6.8          | \$7.0          | \$7.3          | \$7.6          | \$8.1          |
| <b>Lang Products and Purchased Service Plus Market Segments Only Covered by Auto Care</b>  | <b>\$323.2</b> | <b>\$330.2</b> | <b>\$338.4</b> | <b>\$348.7</b> | <b>\$369.9</b> | <b>\$372.1</b> |
| <b>Difference Between Auto Care and Lang Estimate of Size of Automotive Aftermarket</b>    | <b>\$15.2</b>  | <b>\$19.0</b>  | <b>\$23.4</b>  | <b>\$27.5</b>  | <b>\$21.6</b>  | <b>\$30.6</b>  |
| <b>Percent Difference Between Auto Care and Lang Automotive Aftermarket Estimate</b>       | <b>4.5%</b>    | <b>5.4%</b>    | <b>6.5%</b>    | <b>7.3%</b>    | <b>5.5%</b>    | <b>7.6%</b>    |

\*Revisions made by Auto Care to items 1 and 5 for 2013-2016 and item 19 for 2016, which changed items 14, 21, and 23 for 2016.

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