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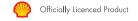
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COMMUNITY

Lighting innovations illuminate the value of training

Shine some light on meeting the vehicle lighting needs of your DIY and DIFM customers.



Team members want to feel empowered not employed. If they feel like they are only doing a job the team will unravel.

12 Auto industry vs. cell phone users

The cable TV, mobile phone and other Wi-Fi sectors dwarf the automotive V2V sector.

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TRENDING



INTERNATIONAL MARKETS

AAPEX ADDS AUTOMOTIVE SERVICE ASSOCIATION INVOLVEMENT

BY JAMES E. GUYETTE | NEWS CORRESPONDENT

 AAPEX anchors the Automotive Aftermarket Industry Week with a lineup of automotive knowledge.

TECHNOLOGY

IMPROVING FLEET TECHNOLOGY

BY BRIAN ALBRIGHT | CONTRIBUTING EDITOR

Vehicle tracking systems can reduce operating costs and improve vehicle maintenance efforts.

TECHNOLOGY

NTSB EXAMINES SELF-DRIVING VEHICLE CRASH

BY BRIAN ALBRIGHT | CONTRIBUTING EDITOR

Tesla is under fire on several fronts after a fatal crash in Florida of a Tesla Model S vehicle operating in the "autopilot" self-driving mode.

VENDOR MARKETS

SMALL STARTUP GETS BIG **RESULTS VIA GOOGLE APP**

BY JAMES E. GUYETTE | NEWS CORRESPONDENT

AutoCustoms says its use of Google AdWords turned the small company's advertising budget into big results.

american business media 🚯

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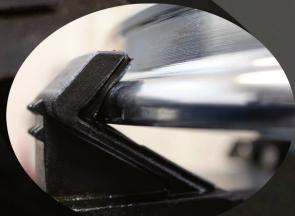


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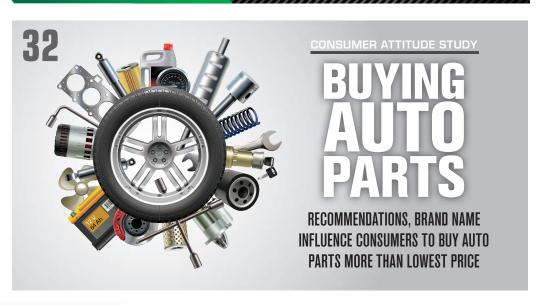
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automechanika COMMITMENT TO TRAINING

CHICAGO



LIGHTING INNOVATIONS SHINE LIGHT ON VALUE OF TRAINING

BY JAMES E. GUYETTE NEWS CORRESPONDENT

ou certainly don't want to be in the dark when called upon to help shine some light on meeting the vehicle lighting needs of your DIFM and DIY customers. Having evolved into becoming a bit more complicated than simply pushing in a matching bulb, obtaining the necessary education to impart illuminating repair and replacement information is taking on heightened importance.

"Good lighting knowledge is paramount to good lighting sales," says Ann-Marie Hines, senior marketing manager at Lumileds LLC (founded by Philips).

At this year's Automotive Aftermarket Products Expo (AAPEX) in Las Vegas the company is launching its Phillips Automotive Lighting Training Academy. "The primary focus of this program will be to train, inform and educate our retail partners and their service customers on lighting sales and service so they can grow their lighting business and maximize their profitability," she says.

"The program will feature a series of modules that will cover everything our customers will need to know in order to create the best lighting selling experience. It will include lighting basics, performance, product technology, installation, maintenance and merchandising." More modules are to be continually added to expand the program.

"Our best advice for both retailers and shops is to check the vehicle's shop manual and review the manufacturer's recommended replacement procedure for servicing the headlamp properly. Some of this information is also available from technical information services such as ALLDATA and Mitchell's," says Hines.

"To help customers find the right bulb for the application, we offer both a print version of our Philips catalog and an easy-to-use Philips online bulb finder that retailers, shops and do-itvourselfers can use to search for their bulb application by vehicle year, make and model."

"In addition to their primary safety function as forward lighting, carmakers have been using them as key styling elements," Hines continues. "As a result, headlamps have become more complex, and because of their integration into the body of the vehicle, more difficult to service. Most technicians will agree that lighting maintenance was much easier in the age of the

sealed beam headlamp. Replacement was simple. Removing the mounting rim gave you access to the headlamp, which could be easily removed and replaced from the front of the vehicle.

"Today, practically all vehicles are fitted with some form of composite headlamp design where its halogen. HID, or LED based, or a combination thereof. They feature multiple bulbs, which in many cases can only be accessed from inside the engine compartment and require extra effort and disassembly to remove and replace."

CHIPS, or Change Headlight Bulbs in Pairs, is a recently rolled-out safetv initiative from the company. "The campaign is aimed at encouraging service technicians and vehicle owners to change headlight bulbs in pairs whenever they need to replace a bulb due to damage, failure, or when one of the bulbs starts to dim," Hines says.

"Headlight bulbs tend to deteriorate and lose effectiveness over a period of 2-3 years. Typically, motorists only replace the bulb that has burned out or is failing. This is not advisable because replacing just one failed bulb can result in an unbalanced or unpredictable headlight beam and potentially present a safety risk."

"Today it is much more complex as automobiles are becoming more

COMMITMENT TO TRAINING SUPPORTERS





























CARMAKERS HAVE BEEN USING HEADLAMPS AS KEY STYL-ING ELEMENTS. THEY HAVE BECOME MORE COMPLEX. AND DUE TO THEIR INTEGRATION INTO THE BODY OF THE VE-HICLE, MORE DIFFICULT TO SERVICE. — ANN-MARIE HINES



fancy, including the way headlights are assembled in cars," reports Robert Gill, North American sales manager at GE Lighting. "In the past, you could just replace the lamp. Now, you may need to take off the bumper or the battery, and this, therefore, may require help from a skilled, knowledgeable person."

GE has downloadable apps to facilitate accurate bulb replacement along with an instructional video. "The more-trained, the more-knowledgeable," according to Gill. "We also offer training through our distributors in key accounts and support through the Auto Care Association."

"Without proper training and knowledge it's easy for technicians and owners to miss out on parts and service sales and profits," says industry consultant Daniel Stern. "I say 'proper' training and knowledge because if it's just based on promotional and advertising material it can quickly land a shop owner in expensive doo-doo."

If a lighting system is modified in an unsafe manner, as in installing improper products or incorrect aiming, in the event of a crash "the shop can be held liable, and it can get very costly," he cautions. "Lamps need to be highquality appropriate parts in good condition - and adjusted correctly."

"Glare issues (adversely impacting oncoming drivers) are usually a result of poorly aimed headlights," says Matthew Brumbelow, senior research engineer at Insurance Institute for Highway Safety (IHHS). For example, "SUV headlights are mounted higher than car headlights, so they generally should be aimed lower. Instead, many of them are aimed higher than the car headlights we've tested so far."

Incidents of excessive glare induced by improper aiming are a waytoo-common occurrence, according to Stern. "Most vehicles in North America never have their headlamp aim properly checked or adjusted after they leave the factory. If it's ever adjusted at all, it's usually a random adjustment, often upward" when performed by someone lacking a suitable understanding of how the systems are designed to operate.

"Bulb replacement ranges from easy to very difficult depending on the vehicle make and model," says Stern, who provides training recommendations and conducts individualized onsite sessions.

"While the basics are pretty universal, the particulars are highly specific in terms of what kinds of vehicles are in mind, what kinds of products, what sorts of goals and results customers are seeking at that particular shop or what services the shop is considering offering," he says. "So in order to be

AUTOMECHANIKA CHICAGO, NACE SIGN LETTER OF INTENT TO COMBINE IN 2017

Automechanika Chicago, the largest U.S. trade show dedicated to highend technical and management-related training for automotive collision and service repair shops, along with NACE (the International Autobody Congress & Exposition), the premiere event for the U.S. collision repair industry, have signed a letter of intent to combine forces starting in 2017.

The co-production between Automechanika Chicago and NACE will create a unified stage using NACE's strong relationships within the collision and OE community combined with Automechanika Chicago's global strength throughout the automotive aftermarket. Working in collaboration, the two entities will create an unprecedented partnership focused on training and product discovery for the automotive technicians, shop owners and parts distributors. A combined Automechanika Chicago and NACE show will take place July 26-29, 2017 in Chicago.

"We are extremely pleased with this alliance. The industry has been asking for this and we listened. By combining the expertise of two undisputed market leaders, Automechanika Chicago and NACE, we are confident of our ability to offer a comprehensive platform for companies interested in reaching collision and mechanical repair shops en masse," said Dennis Smith, President and CEO, Messe Frankfurt North America.

Automechanika Chicago produced its inaugural show in April of 2015 in partnership with UBM, formerly Advanstar Communications, training more than 2,000 technicians and shop owners. NACE has served the automotive repair and collision market for more than 30 years. The strong commitment to the automotive industry by each of these groups solidifies the combined position to exceed the demands of the market.

"By combining resources, this collaboration will provide the market with a unique opportunity to connect each segment of the industry thus serving the entire automotive collision and service repair audience," said Dan Risley, President and Executive Director of the Automotive Service Association (ASA).

"This partnership is a real opportunity for shop owners, managers and technicians to connect at an event tailored to them by groups that understand their training needs and the real-world repair issues they face," said UBM Automotive VP & GM Jim Savas.

useful and cost-effective, an education program really has to be tailored on a case-by-case basis."

"Lighting devices have lots of engineering involved, therefore training will provide details and arguments for technicians and sales crews to provide better service, advice and support for their customers or endconsumers," reports HELLA product manager Alfredo de la Vega.

"From color temperature to wattage consumption, from technology to better aiming, it makes a huge difference," he points out. During last year's AAPEX the company launched its "one-stop shop" www.hella.com/ techworld technical portal with an array of online training programs, videos, manuals and bulletins regarding vehicle-specific lighting systems.

HELLA sales and product advisors are also available upon request to conduct specialized onsite instruction at your particular business.

Maximizing safety and sales

"Asking a simple question such as 'do you want to see better when driving at night?' can help motorists understand the importance of changing their headlights for an improved onroad experience," explains SYLVA-NIA Automotive Lighting marketing manager Brian Noble, echoing the Car Care Council's recommendation that headlamps should always be replaced in pairs to maximize lighting performance and safety.

"Vehicles have more complex lighting options today than ever before. New and improved technology includes adaptive headlights, laser headlights and systems that manage high/low beams," says Noble.

"Additionally, consumers need to know a lot more about their headlights if their car comes with either halogen, HID or LED bulbs," he says.

"Newer technology adds to the safety of headlights, but it also affects the overall cost. Today, a frontend accident could cost thousands of dollars as compared to a couple of hundred. Furthermore, most of the new systems, outside of halogen headlights, require going to a dealer or a mechanic for repairs if there is an issue," says Noble.

"Luckily, newer technology lasts longer than traditional products that have a filament," according to Noble. "The overall market still has the vast majority over 90 percent - of the cars and trucks using halogen bulbs that are less expensive and easier to replace," he says.

"Most vehicles have a similar, but slightly different, process to changeout bulbs. They could use the same bulb, but would need to use different tools and follow a different installation process based on the car and manufacturer," says Noble.

"With lighting, the first place we send installers is sylvania.carcarekiosk.com. Training videos and other resources are organized based on vehicle-specific install. The site also includes guides that detail how to aim bulbs, what happens if grease is on the bulbs, the benefits of value-added product, and more," he says.

Store-level training is provided as well. "Most of the time it is specific to the retailer based on their objectives, product lines and the needs of their target audience," says Noble.

Knowledgeable aftermarket businesses are able to assist owners of older vehicles by providing the latest lighting fitments for yesteryear's fixtures.

"Safety is a major concern when driving our vintage and classic cars on today's highways. Original vehicles move slower on the road than their modern counterparts," notes Stephen Kassis at The Filling Station restoration house in Lebanon, Ore. "Having LED tail lights on the rear of our vintage cars helps other drivers see us quicker than with standard tail lights. This is helpful even in daylight hours."

Philips' Hines points out that the recently released Philips Classic Car



Lighting Catalog for 1969 to 1998 domestic and import cars, SUVs, light trucks and vans showcases headlamp upgrades that "let vintage and custom car enthusiasts maintain a stock look during the day while having a dramatic, bright white light at night."

Turning the corner

"There are a variety of auto lighting technologies, though many of them aren't for the U.S. yet, due to NHTSA standards that say headlamps should have a low beam, high beam and a means of switching to thus," says Jason Bartanen, director of industry technical relations at I-CAR, the Inter-Industry Conference on Auto Collision Repair.

Bob Jansen, I-CAR's senior instructional designer, says the upand-coming laser headlamp technology, for instance, is said to be some 1,000 times more efficient than LEDs.

"I'm also talking LEDs that cater their beam in multiple patterns based on the road ahead and vehicles oncoming. The beams are able to both give a bright light to where you're going and avoid dazzling oncoming drivers at the same time," says Jansen.

"In the U.S., the most advanced technology is LED lamps, which started in rear lamps, trickled slowly to the front as daytime running lamps, then finally headlamps," he recounts. "The issue with LEDs is that you can't replace the bulbs individually, just as a complete lamp assembly. Expensive, but that's all you can do. The plus side of that is that it's not that difficult."



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HOW TO BUILD AN **EFFECTIVE TEAM**

Team players need good attitudes, skills and goals

fter reading the headline above, John C. Maxwell's quote "Teamwork makes the dream work" might be circulating in your head - it does in mine whenever people talk about teamwork. Most people only remember and repeat the first part of the quote. Here's the rest of it: "...but a vision becomes a nightmare when the leader has a big dream and a bad team."

While teamwork does make the dream work, what really makes the team work? I believe attitude, skill set and personal goals all play a part in being a good team player. You must have the right people in the right place. with the needed skill set and the right desire. A thorough review of each potential teammate is required to set a good foundation for sustainability.

To build a successful team you need to know what makes a potential team player tick and how they interact. The best way to accomplish this is through personality testing.

There are multiple choices for testing. The most popular seems to be the Briggs Myers test that identifies 16 different personalities. Yes, I said 16 different personalities. That's why I said earlier you were building a puzzle. I am positive your head will spin a little as you work to match personalities in your team's development.

Knowing what personalities you have and what personalities will work with each other is definitely the first step in successful team building.

Along with having the right personality, a good team member must have a skill set required to achieve the goal. Without having the skill set needed, a person is just in the way; they cannot assist the team in achieving the goal and can become an obstacle.

Matching the skill sets is another part of the puzzle you will need to work through when formulating your team.

You might find through personality testing that your estimator does not deal with customers well but is very organized and detail oriented. Moving that person from a customer service position to a production manager function might suit the team and improve your overall team performance.

Now that you have the personalities and the skill sets sorted out it's time to involve the individuals you need to form your team. Bring them together, explain your goals and solicit their ideas on how to achieve your objective.

Having their buy-in and commitment is your first step toward completing your puzzle and developing your team. Knowing they are an integral part of your success will make them feel involved and more dedicated.

Once you have your team assembled, it is time to get to work to achieve your goal. Give the team room to do the tasks required to complete the objective. Rely on their commitment to drive them. As they continue to gel, an informal leader will rise to positively influence the team. Think of the football quarterback, or basketball team captain - they generally do not have the power or authority of the coach, but the team respects them and follow their instructions and guidance.

We have always been told that there is no "I" in team, but I believe individual effort plays a big part in a team's success. Sustainability will be achievable when an individual combines his or her personal goals with your team



Team members want to feel empowered not employed. Once they feel like they are only doing a job the team will unravel.

goals. When an individual team member grows, the inherent competition of people will drive the other committed team members to improve as well.

As long as the "I" is handled correctly, without an ego attached, the team will prosper through individual growth. It is invaluable when one team member can add value to another team member through encouragement, friendly competition and coaching.

Remember, team members want to feel empowered, not employed. Once they feel like they are only doing a job the team will begin to unravel. Just as one type of informal leader can make the team thrive, another can bring it down. So it's important to communicate with the entire team to remind them of their value.

Give them what I like to call "an early win" - an easy goal to achieve that will require the entire team's input. Once they have a win under their belt, they will reach for the next one to systematically achieve your objective.

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AUTO INDUSTRY VS. **CELL PHONE USERS**

Wi-Fi users threaten V2V spectrum flexibility

he auto industry is facing off against the cable television, cell phone and other Wi-Fi-dependent sectors in an effort to preserve the radio spectrum reserved for vehicle-to-vehicle (V2V) communications.

The Federal Communications Commission (FCC) allocated the 5.9 GHz Safety Spectrum band to dedicated short range communications (DSRC) in 1999 for the purpose of intelligent transportation systems (ITS). But with V2V automotive applications slow to develop, Wi-Fi users are demanding a piece of the V2V space.

In June, the FCC took the next step in a regulatory proceeding that has been germinating for a few years. It issued a proposed rule laying out two possible means for sharing the DSRC spectrum and announced a new threephase testing program designed to determine whether interference with V2V communications can be abated when non-auto companies use the spectrum. The testing should finish by early 2017.

In terms of sharing the spectrum, the FCC is looking at two alternatives. The first is called "detect and avoid" which involves detecting the presence of DSRC signals and avoiding using the spectrum in the band when DSRC signals are present. The "re-channelization" approach involves splitting the DSRC spectrum into two contiguous blocks: the upper 30 MHz part of the band exclusively for safety-related communications, and permitting unlicensed devices to share the lower 45 MHz part of the band with non-safety DSRC communications.

Steven Bayless, vice president, technology and market, Intelligent Transportation Society of America, which isn't opposed to sharing, says V2V applications will need the entire 75 MHz allocated by the commission.

"It cannot be chopped up and served a la carte based on arbitrary distinctions of safety vs. non-safety applications made by other parties with a goal of minimizing DSRC use of the band," he says. The auto industry and its suppliers back the detect and avoid option because it allows them to deploy the radio equipment they have been developing for years. Rechannelization would upend those efforts.

Auto industry partisans argue that detect and avoid will more likely protect DSRC from harmful interference and will not require any changes to DSRC's system design or the FCC's DSRC rules. General Motors will be bringing DSRC technology to market this year in the 2017 Cadillac CTS. That DSRC technology would comply with the dictates of the new Federal Motor Vehicle Safety Standard (#150) the National Highway and Traffic Safety Administration is scheduled to propose imminently, according to GM. Delphi is one of the suppliers for the CTS. Delphi is ready to install its devices in the aftermarket as well, according to Joseph R. (Bob) Dockemeyer Jr., technical fellow -Advanced RF Infrastructures and Services, Delphi Automotive.

The cable television and Wi-Fi industries argue that they need part of the DSRC 5.9 GHz band to advance nextgeneration Gigabit Wi-Fi. "It is the only band that can support this technology," says Rick Chessen, senior vice president, Law & Regulatory Policy, National Cable and Telecommunications

The cable TV. mobile phone and other Wi-Fi sectors dwarf the automotive V2V sector.

Association, Rechannelization will allow for that.

The potential threat to V2V communications is even more acute now given the FCC's recent decision to allow more latitude for higher-powered, unlicensed U-NII devices in the the U-NII-3 band. That 5850-5895 MHz band sits on the lower border of the 5.9 MHz band at issue. So interference with V2V applications is already a bigger threat than it was a year ago.

In terms of users, the cable TV, mobile phone and other Wi-Fi sectors dwarf the automotive V2V sector. So the former have a leg up in terms of their economic justification and political punch in Washington. Comments made by FCC commissioners seem to indicate a preference for rechannelization. If the FCC goes that route, it could pose problems for any meshing with the NHTSA's soon-to-be proposed FMVSS 150.





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EVS, CONNECTED VEHICLES WILL RESHAPE THE AUTOMOTIVE AFTERMARKET

BY BRIAN ALBRIGHT | CONTRIBUTING EDITOR

getting a lot of attention during the past five years, electric vehicles are still just a small part of the entire vehicle fleet. According to Navigant, there were just 2.6 million hybrids, plug-in hybrids, and battery electric vehicles on the road globally in 2015, a number that is expected to grow to slightly more than 6 million by 2024.

The market for connected vehicles, meanwhile, is growing quickly. Gartner forecasts that one in five vehicles on the road worldwide will have some form of wireless network connection by 2020.

How will the roll out of additional high-tech and electric vehicle models affect the aftermarket parts supply chain? These new types of vehicles will require new categories of replacement parts and assemblies, while demand for other types of replacement parts may decline as they increasingly rely on electronic functions rather than mechanical ones.

As EVs, connected cars and other types of vehicles continue to incorporate advanced technology, more parts and components will include processors and embedded software.

"That can make it considerably more difficult to build compatible parts," says Aaron Lowe, senior vice president of regulatory and government affairs at the Auto Care Association. "Some of that is also due to OEMs protecting that software through copyright protection, which has become a major issue in the aftermarket."

At ACDelco, Bob Stewart, manager of aftermarket service support, says there will be more modules that need to be set up with a tool or are programmable once installed, which affects installation at the repairer level.

"The other big thing we've seen is



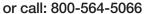
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THE AFTERMARKET SUPPLY CHAIN WILL HAVE MORE INFORMATION ABOUT PART FAILURES AND CUSTOMER DEMAND, BUT THE TYPES OF PARTS REQUIRED AND THE FREQUENCY WITH WHICH THEY ARE REPLACED WILL CHANGE DRAMATICALLY.

that there are more remanufactured electronic assemblies," Stewart says.

Demand for connectivity will expand beyond new vehicles, which presents an opportunity for the aftermarket. While newer vehicles will be increasingly connected, the fact remains that

the overall fleet is increasingly getting older. The aging of the vehicle fleet will likely be exacerbated by the fact that younger drivers are delaying vehicle purchases or putting off buying a car altogether.

"Having a sufficient number of cars in the fleet that can communicate will require the aftermarket to provide and install that equipment," Lowe says.

When it comes to electric and hybrid vehicles, the types of parts and assemblies that may see growth in the future will depend on which types of alternative fuel sources gain traction.

"Whether we see bigger growth in electric cars or fuel cell vehicles could change parts demand, or reduce the number and types of components that have to be repaired because they aren't under the same type of stress as in a traditional car," Lowe says. "How big the opportunity is and when those technologies will come into the market remains to be seen."

More data will improve the supply chain

With more telematics technology and connectivity in the vehicle fleet, repairers could conceivably get faster access to information about what

services or parts will be needed for a given repair. That, in turn, could provide better demand signals to the rest of the parts supply chain. According to Stewart, however, efforts to develop ways to effectively leverage that data are still in their infancy.

"Everybody's desire is to get more data to be able to forecast demand,"

Stewart says. "But at the end of the day we're dealing with mechanical parts. From a service perspective, if there is a trouble code in a vehicle there are still additional diagnostics that have to go on to determine what the problem is."

The types of repairs needed also will

evolve as more technology is integrated in the vehicle. Parts are continuing to get more durable (which has been the case regardless of electrical vehicle or connectivity), but there will also be more fixes delivered via firmware or software upgrades.

"An independent shop can make those repairs but they have to have the

right equipment," Lowe says. "That's actually more of a threat to the dealers because if you don't need to go back to the dealership to get the car updated, you can get it repaired anywhere."

The Right to Repair movement achieved a key victory a few years ago in getting OEMs to provide all software and repair information in the cloud beginning next year for these newer model cars. That will go a long way toward providing access for independent repairers.

The biggest challenge is to understand the data and what it really means. That will be the key to mov-

> ing from simply trouble code reporting to providing actionable information to consumers and shops. "We have some 2016 model years that have vehicle health management for the electrical systems, and we're testing that to understand

how we can predict battery failure or alternator failures before they happen and notify the customer," Stewart says.

Customers could then be notified via OnStar or a text message. "There is a lot of fear that we are only going to put that out to OEMs and dealers, but the aftermarket is part of this whole equation. You want the customer to have a positive service experience. At the end of the day it doesn't matter where the GM vehicle gets repaired; if they have a good experience the likelihood of buying our product is greater," Stewart says.

Stewart emphasizes that the data is still useless without the input of a skilled repairer. "For many of these repairs, you still have to do physical tests beyond getting the data," Stewart says. "Data is the diagnostic indicator but you have to put everything together to figure out what the failure is and what needs replaced. Telematics is just a remote reading of the fault code; you still need service information from going through the whole diagnostic process to fix the root cause."



The aftermarket supply chain will have more information about part failures and customer demand, but the types of parts required and the frequency with which they are replaced will change dramatically.

"A lot of this is going to depend on the technology," Lowe says. "No one knows if it will be pure electric or hybrid or hydrogen. They will all have reduced needs for different engine parts compared to gasoline-powered engines. They'll still need tires and brakes, but it will be different."

"We are still quite a bit away from the car sending a code and letting the shop and distributor know that you need to order this part for it before the car gets here," Stewart says. "That's everybody's ultimate goal, but I think there are some challenges yet to be



Aaron Lowe



Bob Stewart

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AAPEX ANCHORS AAIW WITH I INFIIP OF AUTO KNOWI FOGE

BY **JAMES E. GUYETTE** | CONTRIBUTING EDITOR

ttendees from all over the world will be convening in Las Vegas for this year's Automotive Aftermarket Industry Week (AAIW).

The Nov. 1-3 Automotive Aftermarket Products Expo (AAPEX) and the Nov. 1-4 Specialty Equipment Market Association (SEMA) Show - your ticket is good for admission to both events - will additionally be anchoring numerous international corporate meetings and organizational conventions designed to deliver the latest in learning along with offering networking opportunities on a global scale.

TRENDS & MARKET ANALYSIS

Widely known as the "eye candy" element of AAIW for its emphasis on custom cars, parts and accessories, the SEMA Show at the Las Vegas Convention Center will also be providing attendees with educational seminars, product demonstrations, special events and networking.

Last year's event attracted more than 60,000 domestic and international buyers perusing displays segmented into 12 sections; the new products showcase highlighted more than 2,500 recently rolled-out components.

Face-to-face discussions

Jointly produced by the Auto Care Association and the Automotive Aftermarket Suppliers Association (AASA) at the Sands Expo and Convention Center, SEMA and AAPEX are gearing up to host more than 2,200 exhibitors and 45,000 targeted buyers among the 160,000-plus attendees from more than 140 nations who are expected to file through the turnstiles.

"While at AAPEX, international buyers can connect with U.S. exhibitors that export and want to connect with new business partners," says Michael Barratt, the Auto Care Association's senior vice president of meetings and events.

"AAPEX works closely with specialists from the U.S. Commercial Service, the export promotion arm of the U.S. Department of Commerce, to assist international buyers attending the event. In 2015, specialists led 26 official buying delegations to AAPEX. New services are planned for 2016, which will add even more value to international buyers' AAPEX experience in 2016."

"All aftermarket channel partners - service professionals, distributors, retailers and manufacturers - benefit from the opportunities for face-to-face discussions and the education that AAPEX provides," according to Chris Gardner, AASA's vice president of programs and member services.

"Manufacturers can display their latest products and showcase their advanced technology. Service professionals benefit from live demonstrations of new products. Distributors and retailers alike gain from meeting with suppliers both old and new," Gardner says. "All aftermarket channel partners can select from the free AAPEXedu sessions and Let's

INTERNATIONAL



KEITH MCMILLEN Founder and CEO, BeBop Sensors





ARE THERE OTHER AUTOMOTIVE APPLICATIONS FOR THIS TECHNOLOGY?

Aimed at setting a new standard for global automakers, BeBop Sensors of Berkeley, Calif., recently unveiled an Automotive Occupant Classification System (OCS) that features embedded car seat sensors with intelligent car occupant sensing technology for safer airbag deployment.

The smart fabric sensor OCS continuously takes full seat pressure images in real time, detecting pressure information and movement from the entire seat for all aspects of physical contact between the occupant and the seat, including leaning forward or back, left or right, crossing legs, detecting the rigid bottom of a child's booster seat, the occupant's size and weight, and more. Current OCS technology only estimates the weight of a passenger in order to deploy or disable airbags when determining if a child or infant car seat is placed on the front passenger seat.



A: As far as "smart" devices go, your car should be one of the smartest. People spend a lot of time in their cars, so a focus for us is finding new and better

ways of both allowing people to interact with their cars and how their cars interact with them.



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FOUR-STAR GEN. MICHAEL HAYDEN (RET.), A FORMER DIRECTOR OF THE CENTRAL INTELLIGENCE AGENCY AND THE NATIONAL SECURITY AGENCY. WILL DELIVER THE KEYNOTE ADDRESS

So we get a lot of inquiries from OEMs and tier 1 suppliers to help them figure out how to make the car more comfortable, ergonomic, responsive or stylish (i.e. upgrade or removal of switches and other control interfaces).

More than anything though, they want to figure out how they can make cars that are less deadly to their passengers and the people they share the road with.

- Q: What are the potential opportunities presented by your OCS developments?
- A: Anything that interacts with an object inside a car; most of the time that means the driver and occupants, but it also means your luggage or groceries. Occupancy sensing for proper airbag deployment is a big problem automakers are still trying to solve and understanding the difference between your six-year-old and your carry-on bag is hard for the seats of today.

Soft switches and gesture interfaces remove some of the "clunkiness" of switches and other hard molded parts while bringing the cost of integrating newer interaction modes down into accessible ranges.

Q: Are there any automakers currently using this?

Tech discussions to expand industry knowledge and develop strategies to advance their business."

The educational offerings have been enhanced with a focus on technology for the entire segment and increased training opportunities for service professionals.

"AAPEXedu has been updated to include a technology track to examine the impact of technology on the industry and prepare aftermarket professionals to take advantage of new opportunities. New for 2016 is the Let's Tech, program, which will allow AAPEX participants to learn more about new A: Automobile cycles are long due to the standards and certifications required in getting any new technology into a car. Most technology in cars on the road today (and especially safety-related tech) has been in development for five years or more followed by more years of certifying compliance to quality and safety requirements. There are certainly automakers who are using earlier generations of tech that attempts to address the use-cases we're discussing, but we have engaged with nearly all of them on trying to help build the cars our children will drive. Or better yet, the cars that will drive them.

- Q: Are there applications for retrofitting this technology into existing vehicles?
- A: For safety mechanisms, this seems less practical due to the heavy regulations involved.

For comfort or ergonomics, many of our applications are designed around the current features of our car interiors, so this is much more conceivable.

- **Q:** Are auto industry suppliers to OEMs using this technology?
- A: Tier 1 suppliers are also excellent partners for us, so much of the old and new tech has been on their minds just as much as ours.

technology in quick presentations of 20 minutes or less throughout the show," Barratt says.

AAPEXedu's technician training includes the return of the Service Professionals program and the concurrent Audio-Video Inc. (AVI) Conference.

Savvy managers

"New for 2016," says Gardner, "AAPEX has partnered with the Automotive Service Association (ASA) to promote and support ASA's Regional Management and Technical Training programs, one of which will be held during AAPEX with a specific focus on management education. This partnership ensures that the independent repair community will access a tremendous amount of value in the training we are offering."

"AAPEXedu features sessions designed to aid aftermarket business owners in advancing their companies' success," Barratt points out. The schedule includes tracks devoted to management, profitability, sales, marketing and customer service.

"In addition, AAPEX attracts the top aftermarket industry executives, industry analysts and thought leaders. Owners and managers have myriad opportunities during the week to network with these leaders and peers in the aftermarket to learn best practices and problem solving," he says.

"Savvy managers will bring their upand-coming staff members to AAPEX. The event is a one-of-a-kind opportunity for aftermarket newcomers to experience the full scope of the industry in one location during one week," says Barratt. "They can meet and network with peers, benefit from the experience and insights of industry leaders, and expand their industry knowledge and value to the company."

"We are excited about the Let's Tech sessions, a new way of delivering valuable information and training quickly," Gardner notes. "These sessions will be useful dialogue starters between buyers and exhibitors about new technologies impacting the aftermarket."

"Education of the next generation of technicians and automotive professionals is important to the future of the automotive industry both in the west and across the United States," says Selwyn Joffe, chairman, president and CEO of Motorcar Parts of America, sponsor of a gala dinner being presented by the California Automotive Wholesalers' Association (CAWA), which represents aftermarket manufacturers, jobbers, warehouse distributors and retailers in California, Nevada and Arizona.

Motorcar Parts of America has pro-

duction facilities located in California, Mexico, Malaysia and China, augmented by administrative offices in California, Tennessee, Mexico, Singapore and Malaysia.

With members arriving from 34 countries, the National Automotive Radiator Service Association (NARSA) is among the many organizations conducting annual side-conventions in conjunction with AAPEX. A full plate of activities includes a NARSA awards breakfast, a golf tournament and a special Cooling System Appreciation Reception.

Another AAPEX-affiliated event is the Remanufacturing Conference presented by the Motor & Equipment Remanufacturers Association (MERA) and Auto Care Association, which will address the challenges and opportunities ahead for the remanufacturing industry.

The Automotive Warehouse Distributors Association's (AWDA) 69th Annual Business and Education Conference offers an array of one-onone business meetings between manufacturers and distributors.

As part of the Auto Care Association, the Import Vehicle Community will be reaching out to its membership, as will the Car Care Council Women's Board and YANG, the Young Auto Care Network Group.

The Automotive Warehouse Distributors Association's 69th Annual Business and Education Conference will offer an array of one-on-one business meetings between manufacturers and distributors.

Might be making news

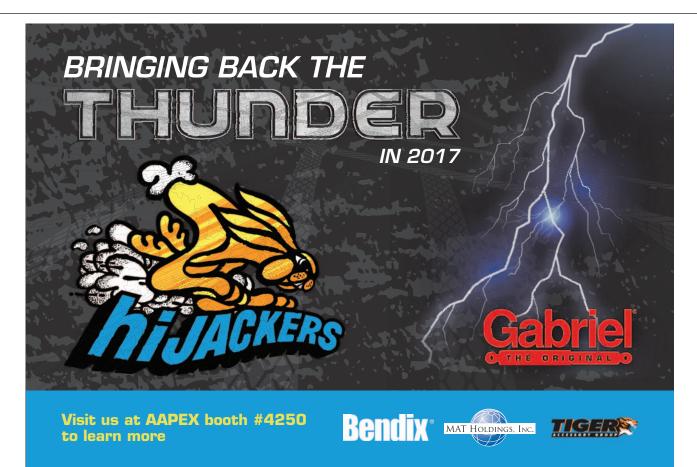
Given the approaching Nov. 8 Presidential election, the Nov. 2 AAPEX General Session is likely to

generate interest as four-star Gen. Michael Hayden (Ret.) delivers a keynote address.

A former director of the Central Intelligence Agency (CIA) and the National Security Agency (NSA), Hayden has been making headlines by joining other traditionally nonpartisan government officials in harshly questioning Donald Trump's fitness to serve as commander-in-chief.

Not exactly enamored of Hillary Clinton either, Hayden has been controversial in telling media outlets that he may not be casting a ballot in the presidential race.

His public comments and concerns regarding Trump have been especially hard-hitting: "I can argue about this position or that position — I do that with the current president," said Hayden in a widely disseminated television interview. "But he's inconsistent. And when you're the head of a global super power, inconsistency, unpredictability — those are dangerous things. They frighten your friends and they tempt your enemies."



THE EMERGING MARKETS

TECHNOLOGY SOLUTIONS

IMPROVING FLEET EFFICIENCY

TRACKING SYSTEMS CAN REDUCE COSTS, IMPROVE VEHICLE MAINTENANCE EFFORTS

BY BRIAN ALBRIGHT | CONTRIBUTING EDITOR

hether you are a large fleet operator with hundreds of delivery or service trucks, or a smaller operator with just a few delivery vehicles, fleet efficiency and vehicle maintenance play a large role in the costs of supporting your vehicle assets. Fluctuating fuel costs, insurance costs, maintenance and tire replacement, and the cost of purchasing new vehicles quickly add up.

Fleet monitoring and management solutions that combine GPS location data, vehicle telematics, routing/ scheduling capabilities, and electronic logging can significantly improve both the utilization and efficiency of a fleet, as well as ensure the vehicles are properly maintained and repaired in a timely fashion.

TRENDS & MARKET ANALYSIS

"Staying on top of these scheduled services as well as monitoring diagnostic trouble codes (DTCs) will ensure the life of fleet vehicles is extended as long as possible," says Ryan Driscoll, marketing director at GPS Insight. "Outside of maintenance, monitoring fleet utilization and balancing the usage of each vehicle can prolong vehicle life as well."

Because the expense of deploying the technology has fallen, these benefits apply to both very large and very small vehicle fleets. For parts retailers, jobbers and distributors that maintain their own fleet of local delivery vehicles, this type of fleet optimization tool can be the difference between a profit and a loss when it comes to delivery.

"Reliability, uptime, reduced wear and tear and reduced maintenance expense over the life of the vehicle matter to small fleets just as much as they do to large fleets," says Kelly Frey, vice president of product marketing at Telogis, a Verizon subsidiary that provides GPS-based fleet management solutions. "The size of the fleet doesn't really matter, other than they may be more apt to use an external maintenance service provider."

Improving fleet maintenance

Fleet management systems can combine contextual information such as location, weight/load, weather, route, and scheduling with rich engine diagnostic information to provide a more complete maintenance picture. The software can determine when and where maintenance should be performed, as well as by whom.

"By alerting fleet managers as soon as events occur, they can perform necessary repairs before they become much larger issues," says Mike Fitzgerald, executive vice president and general manager at Innova Telematics Solutions. "For example, a malfunctioning O2 sensor will throw a check engine light and with the Innova system, an alert is sent immediately to the fleet manager. The value in this quick response is that the fleet manager can promptly schedule service to replace the oxygen sensor, thereby preventing further problems such as the costly replacement of the catalytic convertor."

By using an application programming interface (API), the fleet solution can even share data with a third-party maintenance shop's internal software to automatically send alerts or schedule repairs. "This way the shop is prepared with the right parts and has the vehicle on the schedule when it is ready to come in," Driscoll says.

For example, Telogis offers its Telogis Maintenance Connect solution in conjunction with Ford and other partners, which collects diagnostic information and severity determination data, and then uses a configurable workflow to alert back-office staff and preferred maintenance providers of an impending service need.

While maintenance is important, most companies deploy fleet solutions to improve utilization and efficiency.

This allows fleet operators to be more proactive or predictive in determining and scheduling maintenance needs, which can help avoid costly breakdowns and extend the life of the fleet vehicles.

The technology can also help measure the cost of maintaining each vehicle by logging and tracking all completed maintenance. "So if a vehicle is clearly more expensive to maintain than others, perhaps it's time to sell it and get a newer vehicle," Driscoll says. "It should also have the ability to schedule maintenance of any kind based on mileage, run time, or dates and then the ability to send automated reminders when service is upcoming or due on a vehicle."



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COMPANIES NEED TO KNOW WHERE A VEHICLE IS AND WHO IS OPERATING IT. OTHERWISE, MANY OF THE SAFETY, TRAINING AND DISPATCHING BENEFITS ARE DIFFICULT TO ACHIEVE

Boosting vehicle utilization

While maintenance is important, most companies deploy fleet solutions to improve utilization and efficiency. Location data is key for fleet management, since it enables route/schedule and asset optimization, as well as geofencing alerts, safety applications, and provides the ability to re-route vehicles based on their current location when emergency calls come in.

"A lot of what these companies are trying to do from the fleet side is understanding where the vehicles are, and look at the utilization of those vehicles," says Barry White, president of Group Seven Consulting in Atlanta, which specializes in field service and fleet solutions. "When you understand utilization, you can potentially buy fewer vehicles, or adjust how those vehicles are used on the road."

As an example, White's company has a customer that uses the fleet solution and GPS tracking to feed operational support systems. "They can dispatch a driver to a location based on certain thresholds met in the network monitoring," White says. "We can actually create a work order to route to the closest technician based on the telemetry position. They drive fewer miles and spend less time in the vehicle."

For long-haul fleets, these solutions can be used for electronic logging to record federal hours of service (HoS) data as well as fuel tax information. This reporting is important to meet federal and state regulations, but manual methods of tracking hours and miles driven are often unreliable - and can result in hefty fees if there is an audit. Using a fleet solution to automatically manage this process can save dozens of hours per week for drivers and administrative staff, and ensure accurate logs.

Improve driver safety

Fleet solutions also offer safety monitoring, which is typically one of the more popular modules because the tracking not only protects drivers but also reduces costs for operators. Typically, owners will monitor speeding events, hard braking, tire pressure, seat belt usage, lane departures without signaling, harsh acceleration, and other data points. These can be used for driver coaching and evaluations. And just having a system in place can often provide savings in vehicle insurance premiums.

"You can see what happens to fuel efficiency for every five miles per hour above the speed limit your drivers are going," White says. "That affects tires as well, which is a huge cost."

"Unsafe driving behaviors such as harsh acceleration, hard braking, speeding, etc., are directly correlated to reduced fuel efficiency and

increased wear and tear. Increased wear and tear and increased unscheduled maintenance events result in more downtime and decreased reliability," Frey says.

In terms of productivity, operators can also monitor MPG data, idling and unplanned miles using planned-versusactual mileage reporting. By combining that with

safety data and applying route optimization technology, companies can generate significant savings on fuel usage. Fleet solutions also remove the burden of monitoring vehicle conditions. "This direct link from vehicles to fleet managers allows drivers to focus on the job at hand and provides fleet managers with useful information to keep their fleet vehicles running safely, dependably and efficiently," Fitzgerald says.

Know who is behind the wheel

A key piece of effective fleet management is driver identity management, which many systems accomplish via a scan of an employee ID (which may include RFID or proximity card technology), or requiring drivers to log in to a computer in the vehicle cab. You don't just need to know where a vehicle is, you need to know who is operating it. Otherwise, many of the safety, training and dispatching benefits are difficult to achieve.

"If a manager hands a driver the keys to his vehicle as a loaner for some reason, that's all well and good but you just blew the metrics on that vehicle," White says. "You can't track anything if you don't know who was operating the vehicle.

"Providing accurate data that is actionable is the most important thing you can do when considering adding these types of systems. You have to know who is behind the wheel."

> Companies utilizing fleet technology also need to properly fund their efforts. Fleet management should be staffed at the right level to ensure data accuracy. The sensors and technology on the



view," White says. "If the power takeoff sensor in a bucket truck fails, then you can't trace the data in a way that is going to be helpful. It's a tough pill for folks to swallow, but it pays off in spades."

That's because the ROI that comes from increased efficiency and fuel savings can have such a large impact on operating costs.

"Saving 10 percent of your costs for rolling the vehicle down the road is not hard to achieve if the systems are managed accurately and efficiently, and the initiative is funded correctly from the support perspective," White says. "The minute your discipline lapses, you lose those benefits." -



Mike Fitzgerald

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THE EMERGING MARKETS

TECHNOLOGY SOLUTIONS

NTSB EXAMINES SELF-**DRIVING VEHICLE CRASH**

TESLA UNDER FIRE FOR FATAL CRASH, 'AUTOPILOT' NAME

BY BRIAN ALBRIGHT | CONTRIBUTING EDITOR

he National Transportation Safety Board (NTSB) has issued a preliminary report on the recent fatal crash of a Tesla vehicle operating in the "Autopilot" self-driving mode in Florida. That crash has cast a shadow on the efforts of Tesla, Google and other companies that have been testing autonomous vehicles for several years now.

A formal investigation by the National Highway Traffic Safety Administration (NHTSA) is still ongoing, and the Securities and Exchange Commission (SEC) is looking into whether Tesla should have informed investors of the crash in May.



According to the NTSB report, the driver of the Tesla Model S was operating the car using Tesla's Traffic-Aware Cruise control and Autosteer lane keeping assistance system, and was driving approximately 10 mph over the posted speed limit.

In August, there was a second autopilot crash when a driver in Beijing sideswiped another vehicle that was parked on the side of the road. There were no injuries. The July crash of a 2016 Tesla Model X, which injured the driver and passenger, was initially reported to have involved the autopilot mode, but Tesla later announced it had no evidence to determine whether or not the feature was activated at the time of the collision.

The Tesla autopilot feature is not a true self-driving system; it is designed to keep the car within the lane and from striking other vehicles under very specific circumstances. The com-



pany has been beta testing the feature with its customers since 2015. In the aftermath of the crashes, Tesla has received criticism for the marketing of the feature, particularly in naming it

"Autopilot" in the first place. In a blog posted after NHTSA announced its investigation into the crash, Tesla noted that neither the

autopilot system nor the driver saw the white side of the trailer because it was backlit against a bright sky.

The Tesla autopilot feature is not a true self-driving system; it is designed to keep the car from striking other vehicles under very specific circumstances.

According to Tesla: "The high ride height of the trailer combined with its positioning across the road and the extremely rare circumstances of the impact caused the Model S to pass

under the trailer, with the bottom of the trailer impacting the windshield of the Model S. Had the Model S impacted the front or rear of the trailer, even at high speed, its advanced crash safety system would likely have prevented serious injury as it has in numerous other similar incidents."

On May 7, 2016, the Tesla was traveling on US-27A near Williston, Fla., when it struck and passed beneath a 53-foot semitrailer before colliding with a telephone pole. The driver. 40-year-old Joshua Brown of Canton, Ohio, died in the crash.

Earlier this year, a Google self-driving car was involved in a minor fender bender in Mountain View, Calif., when it drove into the side of a bus. The accidents have raised questions about the technology's safety.

"It's a wakeup call to a lot of people," says Joe Register, director of emerging technologies at the Auto Care Association. "Having the ability to do something, and the practical application of it are two different things."

The crashes have not deterred Tesla. Speaking at a conference early in the summer, CEO Elon Musk said that he thought the industry was less than two years from having fully autonomous vehicles on the road, and appeared to hint that full self-driving capabilities could be available on its new Model 3 sedan.

During an August 3 earnings call, Musk was even more bullish: "Autonomy is going to come a hell of a lot faster than anyone thinks it will, and I think what we've got under

development is going to blow people's minds. It blows my mind," he said.

Consumer Reports was less impressed. "By marketing their feature as 'Autopilot,' Tesla gives consumers a false sense of security," says Laura MacCleery, vice president of consumer policy and mobilization for Consumer Reports. "In the long run, advanced active safety technologies in vehicles could make our roads safer. But today, we're deeply concerned that consumers are being sold a pile of promises about unproven technol-



ogy. 'Autopilot' can't actually drive the car, yet it allows consumers to have their hands off the steering wheel for minutes at a time. Tesla should disable automatic steering in its cars until it updates the program to verify that the driver's hands are on the wheel."

Other automakers are also moving forward with autonomous driving initiatives. BMW has teamed with Intel and Mobileye on its iNEXT, which is scheduled for production in 2021. Over the summer, Mobileye announced it would end its partnership with Tesla

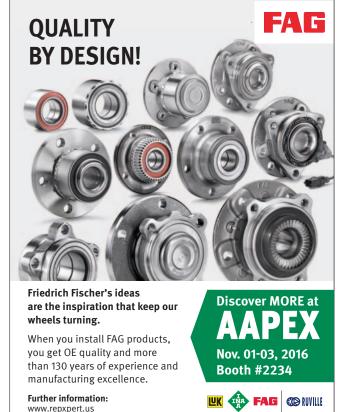
on the Autopilot system.

There are currently a number of autonomous car projects around the country, including a 32-acre proving ground called MCity where the University of Michigan and state Department of Transportation will test connected and autonomous vehicles in different driving sce-

narios. "There is a great potential, but we haven't really got this technology nailed down yet," Register says. "To have vehicles on the road with autonomous driving capability – people are just now beginning to understand what the implications are."

The NTSB will continue to review the accident data and collect additional information from the vehicle's electronic systems. The agency's final report is expected within the next year. Until then, NTSB's preliminary report is available on their website.





VENDORS

SMALL STARTUP GETS BIG RESULTS VIA GOOGLE APP

AUTOCUSTOMS AIMS TO DELIVER A 'WOW' ONLINE SHOPPING EXPERIENCE

BY **JAMES E. GUYETTE** | NEWS CORRESPONDENT

eadquartered in Ocala, Fla., AutoCustoms markets a full range of truck and 4WD accessories such as lift kits, wheels and tires, tonneau covers and running boards.

According to founder and President Stuart Compton, a partnership with Google is expected to assist in delivering a triple-digit growth rate within the next few years. Compton attributes 70 percent of the company's 2015 sales to Google AdWords, "which turned this small startup's advertising budget into big results."

The company also creates YouTube videos to inform and train end-user customers and installation professionals while building brand awareness. An assortment of Google Apps is leveraged for workflow tools like Gmail, Google Docs and Google Sheets for sales, overall connectivity and administrative purposes.

An account of AutoCustoms' success is featured in Google's nationwide Economic Impact Report that details how businesses have benefitted by using the cyber-giant's online offerings.

Compton answered these questions posed by Aftermarket Business World.

Q: What is your company's history?

A: Our story is a classic garage startup. I was in sales at a manufacturing company in 2001 when the easiest sale of my life came from an e-commerce company. I spent the next few years learning how to build websites at night, and in 2003 launched my first e-commerce site.

I learned a few things and in 2005 started a company and hired my best friend, Jeff Martin, to help me take sales calls. From there we grew with two simple rules: Know more than anyone else on the planet about our products, and hire really nice people who truly care about our customers.

We grew to 100 employees and \$50 million in sales in 10 years, and we are still growing. In May 2016 we merged with RealTruck, a top competitor, so now we expect to hit \$150 million with 270 employees in 2016.

Q: What is Google AdWords, and how did you decide to apply this program to your business?

A: Google AdWords is the platform that allows us to advertise our product offering at the top of the Google search. I started using Google AdWords in 2005 with a limited budget. We had a

limited flow of traffic from the organic search results and I was looking for a way to get more of our customer base to our site. AdWords allowed us the opportunity to reach more of our customers and drive a very targeted delivery message that resulted in our customers getting what they were looking for without wasting their time.

Q: Did you have assistance from Google or someone else in preparing your program?

A: Early on I was self-taught using both the information provided by Google as well as forums such as WebMasterWorld.com. As I turned our digital advertising over to our in-house specialists, they were able to develop relationships with Google representatives who were able to help us learn and take advantage of all of the latest tools and platforms.

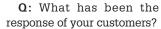
Q: How difficult was it to implement? Do you recommend that others in the industry utilize AdWords?

A: AdWords is easy to learn for anyone who dedicates the time and effort. Most people that I talk to think that it's rocket science so they don't even try. The reality is that anyone who is in business and wants to win their market needs to be utilizing AdWords.

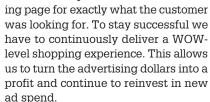
Q: How are you using this program?

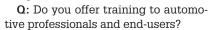
A: I have a team dedicated to optimizing our AdWords accounts. The primary goal is to get consumers who are searching for specific items using certain keywords or phrases to the right page on our website. We value our customers' time and we want to land them on the exact page that they were hoping to find. We try to maximize our

> advertising spend by optimizing our search keywords as well as our ad text, and then we optimize our landing page to turn shoppers into buyers.



A: Our customers love the shopping experience. It is mutually beneficial when we can provide an ad and a land-





A: We offer online training videos.

Q: How has AdWords helped create added employment opportunities?

A: Overall, AdWords has delivered consistent, qualified traffic to our website that brings us almost unlimited opportunities for growth in all of our departments. \Box



Stuart Compton

TECHNOLOGY SOLUTIONS

THE EMERGING MARKETS

REVERSING THE TREND

HOW TO TURN RETURNED AFTERMARKET PRODUCTS INTO RETURN BUSINESS

BY **STEPHEN HEWITT |** CONTRIBUTING EDITOR

f you've been in business for any period of time, you know success (however defined) more closely resembles a knotted arrow than a straight one.

Such is the case with returns.

TRENDS & MARKET ANALYSIS

Returns don't always inspire positive sentiments among retailers, with many believing they simply represent a loss of revenue. However, a lacking returns policy poses a more serious threat to revenue than any returned item. A strong returns policy showcases another facet of great customer service and could evoke a vote of confidence from shoppers looking for another reason to take the next step in the purchasing cycle.

Approximately 75 percent of respondents are not willing to pay restocking fees if they return automotive replacement parts that were purchased through e-tailing.

It's important to note that automotive online returns have become more common in aftermarket e-commerce. According to UPS's 2015"What's Driving the Automotive Parts Online Shopper" study, 39 percent of auto parts shoppers return items compared to 27 percent in the 2014 study. Nevertheless, returns represent fertile ground for any retailer looking to build loyalty and drive revenue. Here's why...

Consumers want to understand your returns policy before they buy, and simply having one isn't enough. The UPS study shows that 53 percent of all auto parts shoppers took a look at an e-tailer's return policy before making a purchase; up from 45 percent in last year's study. Consumers consistently seek out return policies on company websites to review terms and conditions, ease of online and instore returns, inclusion of a returns label, and if there is a penalty for returning an item.

The UPS study found that more than 86 percent of online auto parts shoppers prefer to return purchases in-store, up more than 11 percent from the 2014 study (75 percent). This is important because virtually all (93 percent) of these customers have purchased products once in the store.

To capitalize on this potential revenue opportunity, you simply need to get customers in your store. Inventory management will ensure that you never run out of stock, either in-store or online. Effective supply chain management will allow you to combine your supply chains into one. By doing this, you can accept a return in-store for a product that was purchased online, positioning yourself for incremental sales.

Online-only companies should not fret. They also have tools capable of creating a customer experience that can drive loyalty. Including a return label in the shipment is a great way to ease the burden of a return. You could

also include a coupon for a future purchase on that return label, essentially inviting the customer to visit your website the next time they want to buy a product.

Including a return label in the shipment or enabling customers to print return labels from your website eases the burden of a return.

An alternative is to enable customers to print a return label directly from your website. Once there, digital marketing tools can work wonders. You can see the items returning customers previously viewed and/or purchased. You can predict the products they are most likely to purchase, even though they sought simply to print a return label. For more cumbersome returns, especially larger items, you can improve the customer experience by helping them find a carrier to pick up the item.

When convenience is achieved, customers will reward you with loyalty. Returns give you that opportunity. Leave no stone unturned when seeking to please your customers.

Editor's note: Stephen Hewitt is an automotive industry marketing analyst for UPS. Hewitt researches business trends that impact automotive OEM and aftermarket parts manufacturers, distributors and retailers. His work includes the UPS "What's Driving the Automotive Parts

RESEARCH



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CONSUMER ATTITUDE STUDY



RECOMMENDATIONS, BRAND NAME INFLUENCE CONSUMERS TO BUY AUTO PARTS MORE THAN LOWEST PRICE

BY BRUCE ADAMS | MANAGING EDITOR

vast majority of consumers who purchase auto parts compare prices before buying, but relatively parts compare prices belove saying, few say that lowest price is the top reason that influences their purchase, according to the Aftermarket Business World 2016 Consumer Attitude Study.

Three out of four customers said that they compare prices before buying parts. The likelihood to check prices before buying varies widely by product category, ranging from 97 percent who said they check prices on oxygen sensors and 93 percent who check auxiliary lighting prices, down to 58 percent who check prices on starters and alternators, and 57 percent who check prices on battery chargers. Of those buying starters and alternators, 26 percent said they did so because their car wouldn't start, which limits time for price shopping. These results were similar to the results of the Aftermarket Business World 2015 Consumer Attitude Study.

When consumers were asked the top five reasons for buying a part, lowest price finished a consistent third, behind recommendation and brand name. Recommendation was selected as the top reason in eight product categories and brand name finished as the top reason in three categories. In-store display/packaging was given as the top reason for purchasers of auxiliary lighting.

Lowest price ranked as the second most important reason for consumers buying in only two product categories - gas-

kets and wheel bearings. The other category that garnered most of the fourth or fifth most important reasons for buying was performance claim/warranty. Other categories that could be selected by consumers were coupon/rebate, impulse purchase, environmental concern and other.

In all 12 product categories consumers said that their primary purchase location was an auto parts store. Other frequently appearing answers included independent repair shop, dealership, discount stores, independent auto store and online.

Methodology: The survey sampling for the 2016 Aftermarket Business World Consumer Attitude Study consisted of a consumer-sampling panel via email. Of the 20,076 invitations sent, 1,461 responses were received for a response rate of 7.3 percent and a +/- 2.1 percent margin of error at the 95 percent confidence level.

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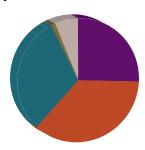
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CONSUMER ATTITUDE STUDY



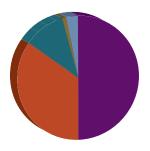
AUXILIARY LIGHTING

Customer service at purchase location:



| Outstanding | 26% |
|------------------|-----|
| ■ Great | 36% |
| ■ Good | 31% |
| ■ Poor | 1% |
| ■ Terrible | 0% |
| ■ Didn't receive | 6% |

Likelihood of returning to purchase location:



| ■ Highly likely | 50% |
|---------------------|-----|
| Likely | 35% |
| ■ Somewhat likely | 11% |
| ■ Somewhat unlikely | 1% |
| ■ Not at all likely | 3% |

93% of consumers compared prices when shopping for this product. 41% of consumers personally installed the product they purchased.

54% Replace damaged lighting Upgrade lighting 39%

Primary purchase intent:

For a custom application 0% Other

The top five advertising channels:

| Saw/heard no ads | 15% |
|------------------|-----|
| Television | 8% |
| Newspaper | 31% |
| Direct mail | 27% |
| Online/Internet | 9% |

Primary purchase location:

| Auto chain | 52% |
|---------------------------|-----|
| Discount/Department store | 14% |
| Independent auto store | 3% |
| Independent repair shop | 9% |
| Online/Internet | 9% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of auxiliary lighting:

| Brand name | 21% |
|----------------------------|-----|
| Performance claim | 18% |
| Recommendation | 19% |
| Lowest price | 11% |
| In-store display/packaging | 23% |

Likelihood to repurchase product based on performance:

| Highly likely | 34% |
|-------------------------------------|-----|
| Likely | 31% |
| Somewhat likely | 27% |
| Somewhat unlikely/not at all likely | 7% |

Vehicle age:

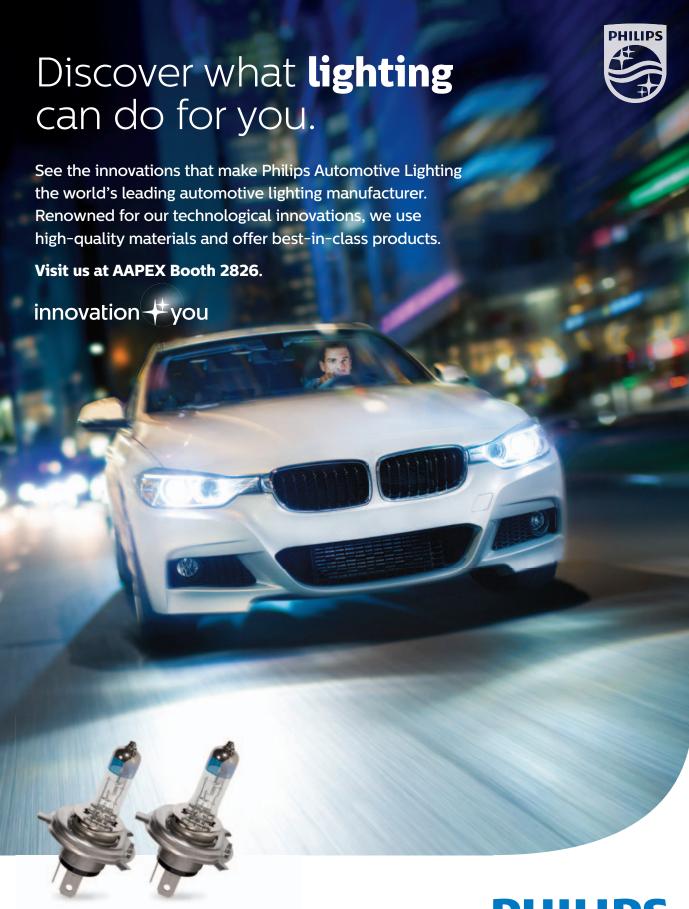
| < 1 year | 8% |
|-----------|------|
| 0.5 | 440/ |
| 2-5 years | 41% |
| 6-9 years | 22% |
| | |
| 10+ years | 29% |

Other work done:

| None | 16% |
|---------------------------|-----|
| Oil change | 20% |
| Collision/body repair | 8% |
| Tune up | 7% |
| Tire rotation/replacement | 10% |
| Other | 1% |

Some chart totals exceed 100 percent as a result of respondents providing multiple answers. Others do not reach 100 percent as all answer options are not represented.

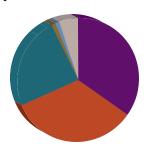






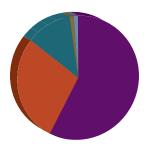
BATTERIES

Customer service at purchase location:



| - Ot-t | 050/ |
|------------------|------|
| Outstanding | 35% |
| ■ Great | 34% |
| ■ Good | 24% |
| ■ Poor | 1% |
| ■ Terrible | 1% |
| ■ Didn't receive | 5% |

Likelihood of returning to purchase location:



| ■ Highly likely | 58% |
|---------------------|-----|
| Likely | 28% |
| ■ Somewhat likely | 12% |
| ■ Somewhat unlikely | 1% |
| ■ Not at all likely | 1% |

74% of consumers compared prices when shopping for this product. 42% of consumers personally installed the product they purchased.

Primary purchase intent:

Mechanic recommended

| Battery was dead | 61% |
|------------------------------|-----|
| Weakened Performance | 21% |
| Reached designated lifecycle | 11% |

The top five advertising channels:

| Saw/heard no ads | 46% |
|------------------|-----|
| Television | 23% |
| Newspaper | 15% |
| Magazine | 9% |
| Internet/email | 25% |

Primary purchase location:

| Auto chain | 58% |
|-------------------------------|-----|
| Discount store | 12% |
| Independent auto store | 4% |
| Independent repair shop | 7% |
| Dealership | 7% |
| *Includes DIY and DIFM purcha | ses |

BUYING HABITS

The top five reasons for purchasing a particular type of battery:

| Brand name | 24% |
|-------------------|-----|
| Performance claim | 20% |
| Recommendation | 25% |
| Lowest price | 20% |
| In-store display | 4% |

Likelihood to repurchase product based on performance:

| Highly likely | 59% |
|-------------------------------------|-----|
| Likely | 30% |
| Somewhat likely | 11% |
| Somewhat unlikely/not at all likely | 0% |

Vehicle age:

6%

| < 1 year | 8% |
|-----------|-----|
| 2-5 years | 22% |
| | |
| 6-9 years | 46% |
| 10+ years | 25% |
| | |

Other work done:

| Outer work done. | |
|-------------------------|-----|
| None | 32% |
| Oil change | 49% |
| Checked/filled fluids | 29% |
| Checked filters | 30% |
| Checked tire pressure | 34% |
| Checked belts and hoses | 24% |





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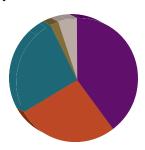
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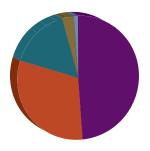
BATTERY CHARGERS

Customer service at purchase location:



| Outstanding | 40% |
|------------------|-----|
| ■ Great | 27% |
| ■ Good | 26% |
| ■ Poor | 2% |
| ■ Terrible | 0% |
| ■ Didn't receive | 5% |

Likelihood of returning to purchase location:



| ■ Highly likely | 49% |
|---------------------|-----|
| Likely | 31% |
| ■ Somewhat likely | 16% |
| ■ Somewhat unlikely | 3% |
| ■ Not at all likely | 1% |

57% of consumers compared prices when shopping for this product.

41% of consumers personally used the product they purchased.

Primary purchase intent:

To improve performance

| Battery was dead/no charge | 50% |
|----------------------------------|-----|
| | |
| Battery seemed low | 26% |
| | |
| To have in case battery runs low | 16% |

The top five advertising channels:

| Saw/heard no ads | 29% |
|------------------|-----|
| Television | 28% |
| Newspaper | 21% |
| Direct mail | 13% |
| Internet/email | 30% |

Primary purchase location:

| Auto chain | 48% |
|------------------------|-----|
| Discount store | 16% |
| Independent auto store | 6% |
| Department store | 11% |
| Dealership | 9% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of battery charger:

| Brand name | 32% |
|-------------------|-----|
| Performance claim | 12% |
| Recommendation | 24% |
| Lowest price | 16% |
| In-store display | 9% |

Likelihood to repurchase product based on performance:

| Highly likely | 41% |
|-------------------------------------|-----|
| Likely | 35% |
| Somewhat likely | 19% |
| Somewhat unlikely/not at all likely | 5% |

Vehicle age:

7%

| < 1 year | 16% |
|-----------|------|
| 2-5 years | 16% |
| | 1070 |
| 6-9 years | 55% |
| 10+ years | 13% |
| | |

Other products/parts purchased:

| None | 21% |
|------------------------|-----|
| | |
| Battery test equipment | 30% |
| | |
| Battery | 27% |
| | |
| Jumper cable | 26% |
| | |
| Battery terminal brush | 19% |
| | |
| Battery cables | 18% |



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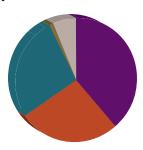


No More Jumper Cables



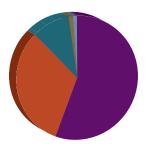
BRAKES

Customer service at purchase location:



| Outstanding | 39% |
|------------------|-----|
| ■ Great | 27% |
| ■ Good | 27% |
| ■ Poor | 1% |
| ■ Terrible | 0% |
| ■ Didn't receive | 6% |

Likelihood of returning to purchase location:



| ■ Highly likely | 56% |
|---------------------|-----|
| Likely | 32% |
| ■ Somewhat likely | 10% |
| ■ Somewhat unlikely | 1% |
| ■ Not at all likely | 1% |

78% of consumers compared prices when shopping for this product. 27% of consumers personally installed the product they purchased.

Primary purchase intent:

| Pedal pulsating/grinding | 18% |
|--------------------------|-----|
| Making noise | 30% |
| Mechanic recommended | 15% |
| Worn out brakes | 32% |

The top five advertising channels:

| Saw/heard no ads | 28% |
|------------------|-----|
| Television | 35% |
| Newspaper | 15% |
| Direct mail | 17% |
| Internet/email | 33% |

Primary purchase location:

| Auto chain | 56% |
|-------------------------|-----|
| Discount store | 2% |
| Independent auto store | 6% |
| Independent repair shop | 24% |
| Dealership | 9% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of brake products:

| Brand name | 19% |
|-------------------|-----|
| Performance claim | 24% |
| Recommendation | 25% |
| Lowest price | 21% |
| In-store display | 3% |

Likelihood to repurchase product based on performance:

| Highly likely | 57% |
|-------------------------------------|-----|
| Likely | 30% |
| Somewhat likely | 11% |
| Somewhat unlikely/not at all likely | 2% |

Vehicle age:

| < 1 year | 12% |
|-----------|------|
| 0.5 | 000/ |
| 2-5 years | 22% |
| 6-9 years | 41% |
| | |
| 10+ years | 26% |
| | |

Other work done:

| None | 38% |
|----------------------------------|-----|
| Steering, suspension maintenance | 16% |
| Shocks/struts | 18% |
| Tire rotation | 37% |
| | 70/ |
| Transmission service | 1% |

Some chart totals exceed 100 percent as a result of respondents providing multiple answers. Others do not reach 100 percent as all answer options are not represented.

Other





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#partsmatter







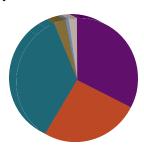
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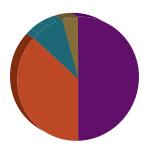
CHASSIS

Customer service at purchase location:



| Outstanding | 33% |
|------------------|-----|
| ■ Great | 26% |
| ■ Good | 35% |
| ■ Poor | 3% |
| ■ Terrible | 1% |
| ■ Didn't receive | 2% |

Likelihood of returning to purchase location:



| ■ Highly likely | 50% |
|---------------------|-----|
| Likely | 37% |
| ■ Somewhat likely | 9% |
| ■ Somewhat unlikely | 4% |
| ■ Not at all likely | 0% |

75% of consumers compared prices when shopping for this product.

31% of consumers personally installed the product they purchased.

| r many parenaee mena | |
|--------------------------------|-----|
| Heard noises, rattles in front | 38% |
| | |
| Loose steering | 21% |
| | |
| Mechanic's recommendation | 20% |
| | |

Primary purchase intent:

Damaged in accident

The top five advertising channels:

| Saw/heard no ads | 21% |
|------------------|-----|
| Television | 27% |
| Newspaper | 20% |
| Direct mail | 25% |
| Internet/email | 34% |

Primary purchase location:

| Auto chain | 38% |
|-------------------------|-----|
| Discount store | 9% |
| Online/Internet | 9% |
| Independent repair shop | 16% |
| Dealership | 11% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of chassis parts:

| Brand name | 24% |
|------------------|-----|
| In-store display | 15% |
| Recommendation | 36% |
| Lowest price | 16% |
| Coupon/rebate | 6% |

Likelihood to repurchase product based on performance:

| Highly likely | 42% |
|-------------------------------------|-----|
| Likely | 31% |
| Somewhat likely | 15% |
| Somewhat unlikely/not at all likely | 12% |

Vehicle age:

| < 1 year | 23% |
|-----------|------|
| 0.5 | 222/ |
| 2-5 years | 39% |
| 6-9 years | 18% |
| | |
| 10+ years | 20% |
| | |

Other work done:

11%

| None | 29% |
|---------------------------------|-----|
| Alignment | 43% |
| Tires rotated/replaced | 34% |
| | 29% |
| | |
| Steering/suspension maintenance | 18% |

Some chart totals exceed 100 percent as a result of respondents providing multiple answers. Others do not reach 100 percent as all answer options are not represented.

Other





More miles in every MOOG.

From engineering to testing to manufacturing to support, we go the extra mile to ensure our parts live up to the MOOG reputation for strength and durability. We recently invited Mike Rowe to come and help put us to the test. He was blown away by what he saw and heard. We think you will be too.

Visit us at AAPEX booth #3217



Watch Mike Rowe in our new web series, The Extra Mile, at moogparts.com

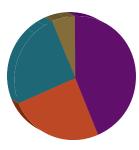
#partsmatter



Go the extra mile."

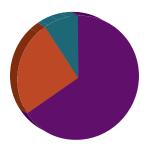
GASKETS

Customer service at purchase location:



| Outstanding | 44% |
|------------------|-----|
| ■ Great | 25% |
| ■ Good | 25% |
| ■ Poor | 6% |
| ■ Terrible | 0% |
| ■ Didn't receive | 0% |

Likelihood of returning to purchase location:



| ■ Highly likely | 66% |
|---------------------|-----|
| Likely | 25% |
| ■ Somewhat likely | 9% |
| ■ Somewhat unlikely | 0% |
| ■ Not at all likely | 0% |

71% of consumers compared prices when shopping for this product. 32% of consumers personally installed the product they purchased.

Primary purchase intent:

| Mechanic recommended | 34% |
|-------------------------|-----|
| Stop fluid leak | 29% |
| Part of a larger repair | 28% |

The top five advertising channels:

Performance/custom work

| Saw/heard no ads | 16% |
|------------------|-----|
| Television | 38% |
| Newspaper | 22% |
| Direct mail | 28% |
| Internet | 28% |

Primary purchase location:

| Auto chain | 44% |
|-------------------------|-----|
| Online/Internet | 16% |
| Independent auto store | 13% |
| Independent repair shop | 9% |
| Dealership | 9% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of gasket:

| Brand name | 23% |
|------------------|-----|
| In-store display | 7% |
| Recommendation | 33% |
| Lowest price | 27% |
| Coupon/rebate | 3% |

Likelihood to repurchase product based on performance:

| Highly likely | 52% |
|-------------------------------------|-----|
| Likely | 26% |
| Somewhat likely | 19% |
| Somewhat unlikely/not at all likely | 3% |

Vehicle age:

9%

| < 1 year | 28% |
|-----------|-----|
| | |
| 2-5 years | 16% |
| | |
| 6-9 years | 44% |
| | |
| 10+ years | 13% |
| | |

Other work done:

| None | 31% |
|----------------------------------|-----|
| Preventative maintenance, repair | 38% |
| Engine repair | 22% |
| Performance/custom work | 19% |
| Check engine light diagnostics | 0% |

Some chart totals exceed 100 percent as a result of respondents providing multiple answers. Others do not reach 100 percent as all answer options are not represented.

Other



"I can't just hope the gaskets work."









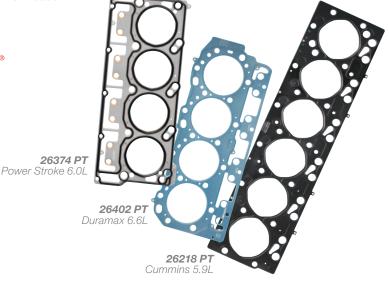
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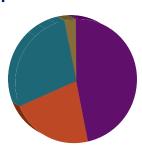






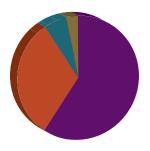
OXYGEN SENSORS

Customer service at purchase location:



| Outstanding | 47% |
|------------------|-----|
| ■ Great | 22% |
| ■ Good | 28% |
| ■ Poor | 3% |
| ■ Terrible | 0% |
| ■ Didn't receive | 0% |

Likelihood of returning to purchase location:



| ■ Highly likely | 60% |
|---------------------|-----|
| Likely | 31% |
| ■ Somewhat likely | 6% |
| ■ Somewhat unlikely | 3% |
| ■ Not at all likely | 0% |

97% of consumers compared prices when shopping for this product.

44% of consumers personally used the product they purchased.

Primary purchase intent:

Mechanic recommended

| Vehicle running sluggishly | 24% |
|----------------------------|-----|
| Preventive maintenance | 36% |
| Remedy check engine light | 24% |

The top five advertising channels:

| Saw/heard no ads | 21% |
|------------------|-----|
| Television | 30% |
| Newspaper | 24% |
| Direct mail | 27% |
| Internet/email | 27% |

Primary purchase location:

| Auto chain | 44% |
|-------------------------|-----|
| Discount store | 9% |
| Independent auto store | 13% |
| Independent repair shop | 6% |
| Dealership | 13% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of oxygen sensor:

| Brand name | 24% |
|-------------------|-----|
| Performance claim | 9% |
| Recommendation | 27% |
| Lowest price | 21% |
| In-store display | 15% |

Likelihood to repurchase product based on performance:

| Highly likely | 63% |
|-------------------------------------|-----|
| Likely | 13% |
| Somewhat likely | 13% |
| Somewhat unlikely/not at all likely | 11% |

Vehicle age:

15%

| < 1 year | 15% |
|-----------|-----|
| | |
| 2-5 years | 12% |
| 6-9 years | 58% |
| | |
| 10+ years | 15% |
| | |

Other work done:

| None | 27% |
|----------------------------------|-----|
| | |
| Tune up | 36% |
| | |
| Spark plug replacement | 33% |
| spans pages processes | |
| Air filter replacement | 27% |
| 7 III IIII O I Opiuoonioni | ,, |
| Ignition wire repair/replacement | 9% |
| iginaen wire repair/replacement | 070 |
| | |





The Most Complete Oxygen Sensor Program!



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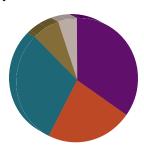
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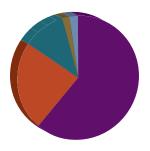
SHOCKS AND STRUTS

Customer service at purchase location:



| Outstanding | 35% |
|------------------|-----|
| ■ Great | 23% |
| ■ Good | 30% |
| ■ Poor | 7% |
| ■ Terrible | 0% |
| ■ Didn't receive | 5% |

Likelihood of returning to purchase location:



| ■ Highly likely | 62% |
|---------------------|-----|
| Likely | 23% |
| ■ Somewhat likely | 11% |
| ■ Somewhat unlikely | 2% |
| ■ Not at all likely | 2% |

70% of consumers compared prices when shopping for this product. 33% of consumers personally installed the product they purchased.

Primary purchase intent:

| Bouncy ride/worn parts | 41% |
|------------------------|-----|
| Poor vehicle handling | 24% |
| Mechanic recommended | 20% |
| Shock/strut leak | 15% |

The top five advertising channels:

| Saw/heard no ads | 36% |
|------------------|-----|
| Television | 23% |
| Newspaper | 21% |
| Direct mail | 11% |
| Internet/email | 21% |

Primary nurchase location

| Filliary purchase location. | |
|----------------------------------|-----|
| Auto chain | 40% |
| Discount store | 7% |
| Independent auto store | 7% |
| Independent repair shop | 31% |
| Dealership | 7% |
| *Includes DIY and DIFM purchases | |

BUYING HABITS

The top five reasons for purchasing a particular type of shock and strut:

| Brand name | 23% |
|-------------------|-----|
| Performance claim | 11% |
| Recommendation | 30% |
| Lowest price | 15% |
| In-store display | 11% |

Likelihood to repurchase product based on performance:

| Highly likely | 43% |
|-------------------------------------|-----|
| Likely | 33% |
| Somewhat likely | 24% |
| Somewhat unlikely/not at all likely | 0% |

Vehicle age:

| < 1 year | 17% |
|-----------|-------|
| 2-5 years | 17% |
| | 11 /0 |
| 6-9 years | 45% |
| 10+ years | 21% |
| | |

Other work done:

| None | 23% |
|---------------------------|------|
| Alignment | 38% |
| Tire rotation/replacement | 28% |
| Suspension/steering | 17% |
| Brake repair | 13% |
| Diake Tepali | 1370 |
| Other | 2% |

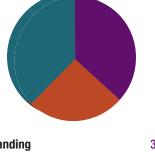






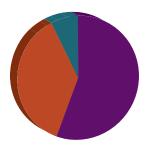
SPARK PLUGS

Customer service at purchase location:



| Outstanding | 37% |
|------------------|-----|
| ■ Great | 26% |
| ■ Good | 37% |
| ■ Poor | 0% |
| ■ Terrible | 0% |
| ■ Didn't receive | 0% |

Likelihood of returning to purchase location:



| ■ Highly likely | 56% |
|---------------------|-----|
| Likely | 37% |
| ■ Somewhat likely | 7% |
| ■ Somewhat unlikely | 0% |
| ■ Not at all likely | 0% |

76% of consumers compared prices when shopping for this product.

50% of consumers personally installed the product they purchased.

Primary purchase intent:

Mechanic recommended

| Preventative maintenance | 48% |
|--------------------------------|-----|
| Fix check engine light problem | 28% |
| To improve fuel economy | 14% |

The top five advertising channels:

| Saw/heard no ads | 38% |
|------------------|-----|
| Television | 28% |
| Newspaper | 28% |
| Direct mail | 28% |
| Magazine | 17% |

Primary purchase location:

| Auto chain | 36% |
|------------------------|-----|
| Discount store | 11% |
| Independent auto store | 14% |
| Online/Internet | 11% |
| Dealership | 14% |
| | |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of spark plug:

| Brand name | 31% |
|-------------------|-----|
| Performance claim | 3% |
| Recommendation | 35% |
| Lowest price | 7% |
| In-store display | 17% |

Likelihood to repurchase product based on performance:

| Highly likely | 50% |
|-------------------------------------|-----|
| Likely | 36% |
| Somewhat likely | 14% |
| Somewhat unlikely/not at all likely | 0% |

Vehicle age:

7%

| < 1 year | 7% |
|-----------|-----|
| 2-5 years | 14% |
| 6-9 years | 62% |
| | |
| 10+ years | 17% |

Other work done:

| None | 62% |
|--------------------------------|-----|
| | |
| Check engine light diagnostics | 24% |
| | |
| Checked/filled fluids | 14% |
| | |
| Battery check, replacement | 14% |
| | |
| Checked tire pressure | 3% |
| | |
| Checked belts and hoses | 17% |



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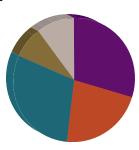
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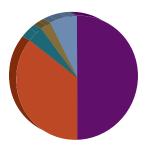
STARTERS ALTERNATORS

Customer service at purchase location:



| Outstanding | 30% |
|------------------|-----|
| ■ Great | 22% |
| ■ Good | 30% |
| ■ Poor | 8% |
| ■ Terrible | 0% |
| ■ Didn't receive | 10% |

Likelihood of returning to purchase location:



| ■ Highly likely | 50% |
|---------------------|-----|
| ■ Likely | 36% |
| ■ Somewhat likely | 4% |
| ■ Somewhat unlikely | 3% |
| ■ Not at all likely | 7% |

58% of consumers compared prices when shopping for this product. 23% of consumers personally installed the product they purchased.

Primary purchase intent:

| Car won't start | 26% |
|----------------------|-----|
| Alternator light on | 26% |
| Battery lost charge | 19% |
| Mechanic recommended | 13% |

The top five advertising channels:

| Saw/heard no ads | 39% |
|------------------|-----|
| Television | 32% |
| Newspaper | 23% |
| Internet/email | 23% |
| Radio | 16% |

Primary purchase location:

| Auto chain | 32% |
|-------------------------|-----|
| Discount store | 7% |
| Independent auto store | 10% |
| Independent repair shop | 26% |
| Online/Internet | 23% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of starter/alternator:

| Brand name | 36% |
|-------------------|-----|
| Performance claim | 7% |
| Recommendation | 32% |
| Lowest price | 13% |
| Coupon/rebate | 7% |

Likelihood to repurchase product based on performance:

| Highly likely | 32% |
|-------------------------------------|-----|
| Likely | 55% |
| Somewhat likely | 7% |
| Somewhat unlikely/not at all likely | 6% |

Vehicle age:

| < 1 year | 10% |
|-----------|------|
| 2-5 years | 19% |
| | 400/ |
| 6-9 years | 19% |
| 10+ years | 52% |

Other work done:

| None | 52% |
|---------------------------|------|
| Tune up | 19% |
| | 1970 |
| Checked/filled fluids | 10% |
| | 222/ |
| Battery check/replacement | 32% |
| Checked tire pressure | 7% |
| | |
| Checked belts and hoses | 36% |

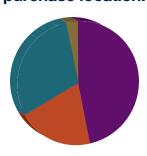






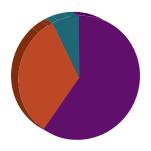
WHEEL BEARINGS

Customer service at purchase location:



| Outstanding | 47% |
|------------------|-----|
| ■ Great | 20% |
| ■ Good | 30% |
| ■ Poor | 3% |
| ■ Terrible | 0% |
| ■ Didn't receive | 0% |

Likelihood of returning to purchase location:



| ■ Highly likely | 60% |
|---------------------|-----|
| Likely | 33% |
| ■ Somewhat likely | 7% |
| ■ Somewhat unlikely | 0% |
| ■ Not at all likely | 0% |

83% of consumers compared prices when shopping for this product.

40% of consumers personally used the product they purchased.

Primary purchase intent:

| Heard rattle/performance issue | 57% |
|--------------------------------|-----|
| Failure in related system | 20% |
| Mechanic recommended | 20% |
| Other | 3% |

The top five advertising channels:

| Saw/heard no ads | 30% |
|------------------|-----|
| Television | 20% |
| Newspaper | 23% |
| Direct mail | 17% |
| Internet/email | 23% |

Primary purchase location:

| Auto chain | 40% |
|----------------------------------|-----|
| Discount store | 7% |
| Online/Internet | 13% |
| Independent repair shop | 17% |
| Dealership | 10% |
| *Includes DIY and DIFM purchases | |

BUYING HABITS

The top five reasons for purchasing a particular type of wheel bearing:

| Brand name | 33% |
|------------------|-----|
| Coupon/rebate | 3% |
| Recommendation | 30% |
| Lowest price | 30% |
| In-store display | 10% |

Likelihood to repurchase product based on performance:

| Highly likely | 47% |
|-------------------------------------|-----|
| Likely | 30% |
| Somewhat likely | 23% |
| Somewhat unlikely/not at all likely | 0% |

Vehicle age:

| < 1 year | 17% |
|-----------|------|
| 0.5 | 400/ |
| 2-5 years | 40% |
| 6-9 years | 20% |
| | |
| 10+ years | 23% |

Other work done:

| None | 37% |
|--------------------------------|-------|
| | |
| Alignment | 43% |
| | |
| Tires checked/replaced | 20% |
| | |
| Check engine light diagnostics | 20% |
| | |
| Battery check/replacement | 7% |
| | |
| Checked belts and hoses | 10% |
| CHECKEU DEILS AHU HOSES | 10 /0 |

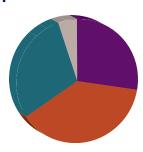






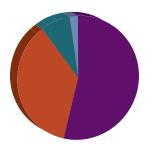
WIPERS

Customer service at purchase location:



| ■ Outstanding | 28% |
|------------------|-----|
| ■ Great | 38% |
| ■ Good | 29% |
| ■ Poor | 0% |
| ■ Terrible | 0% |
| ■ Didn't receive | 5% |

Likelihood of returning to purchase location:



| ■ Highly likely | 54% |
|---------------------|-----|
| Likely | 36% |
| ■ Somewhat likely | 8% |
| ■ Somewhat unlikely | 0% |
| ■ Not at all likely | 2% |

63% of consumers compared prices when shopping for this product.

59% of consumers personally installed the product they purchased.

Primary purchase intent:

Other

| Wipers performing poorly | 60% |
|--------------------------|-----|
| Preventive maintenance | 18% |
| Broken wiper blades | 14% |

The top five advertising channels:

| Saw/heard no ads | 70% |
|------------------|-----|
| Television | 7% |
| Magazine | 6% |
| Direct mail | 9% |
| Internet/email | 12% |

Primary purchase location:

| Auto chain | 44% |
|-------------------------|-----|
| Discount store | 22% |
| Independent auto store | 7% |
| Independent repair shop | 8% |
| Online/Internet | 7% |

*Includes DIY and DIFM purchases

BUYING HABITS

The top five reasons for purchasing a particular type of wiper:

| Brand name | 21% |
|-------------------|-----|
| Performance claim | 21% |
| Recommendation | 22% |
| Lowest price | 15% |
| In-store display | 15% |

Likelihood to repurchase product based on performance:

| Highly likely | 55% |
|-------------------------------------|-----|
| Likely | 29% |
| Somewhat likely | 12% |
| Somewhat unlikely/not at all likely | 4% |

Vehicle age:

7%

| < 1 year | 7% |
|-----------|------|
| 0.5 | 000/ |
| 2-5 years | 23% |
| 6-9 years | 41% |
| | |
| 10+ years | 29% |

Other work done:

| None | 46% |
|-------------------------|-----|
| Oil change | 34% |
| Checked/filled fluids | 21% |
| Checked filters | 18% |
| Checked tire pressure | 21% |
| Checked belts and hoses | 7% |



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Bartec

AAPEX booth 1073

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nology. It extends battery life under ever-increasing battery box temperatures. It also has a reinforced cycle service AGM design to better withstand extra electrical loads in high heat environments.

www.eastpennmanufacturing.com

East Penn Manufacturing Co. AAPEX booth 44216

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For more information, visit www.motorcarparts.com

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www.philips.com/visionled

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Delivering noticeable cranking power at a great value without sacrificing guaranteed reliability, the Ultra Duty battery combines the best of both worlds: quality/ price ratio and performance. Among its features are its leakage-free design, its



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tced.ca/shell-batteries/

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Premium Oxygen Sensor program is the most comprehensive OE based sensor program in the aftermarket. Our sensors feature 100% OE fit, form, and function and are available for both domestic and import vehicles.

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Walker Products | AAPEX booth 2261

THE BATTERY DOCTOR 12/24 VOLT SMART BATTERY CHARGER

The Battery Doctor #20068 Smart Battery Charger charges and maintains at 12V/8A and 24V/4A. The digital display shows voltage, amperage and battery charge percentage. The 7 stage Smart Battery Technology prevents overcharging. It has reverse polarity protection and is spark resis-



tant. It will charge and maintain batteries from 5-400 amp hours and includes ring terminals and alligator clip cable attachments.

www.wirthco.com

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www.wirthco.com

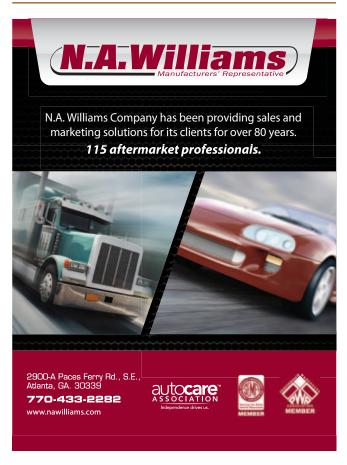
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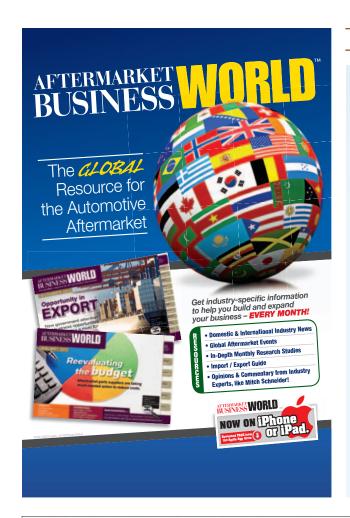


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