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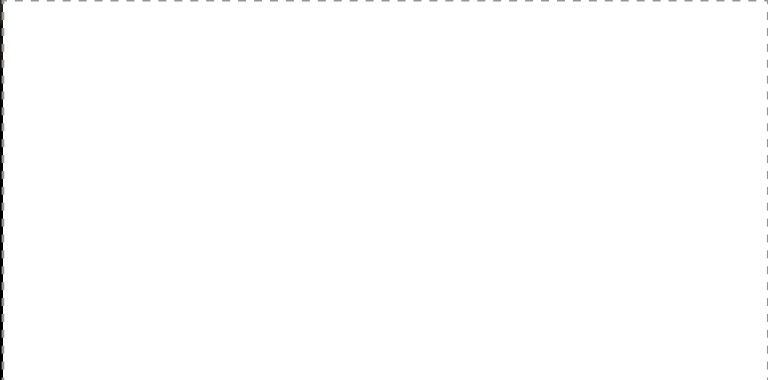



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NOVEMBER 2014

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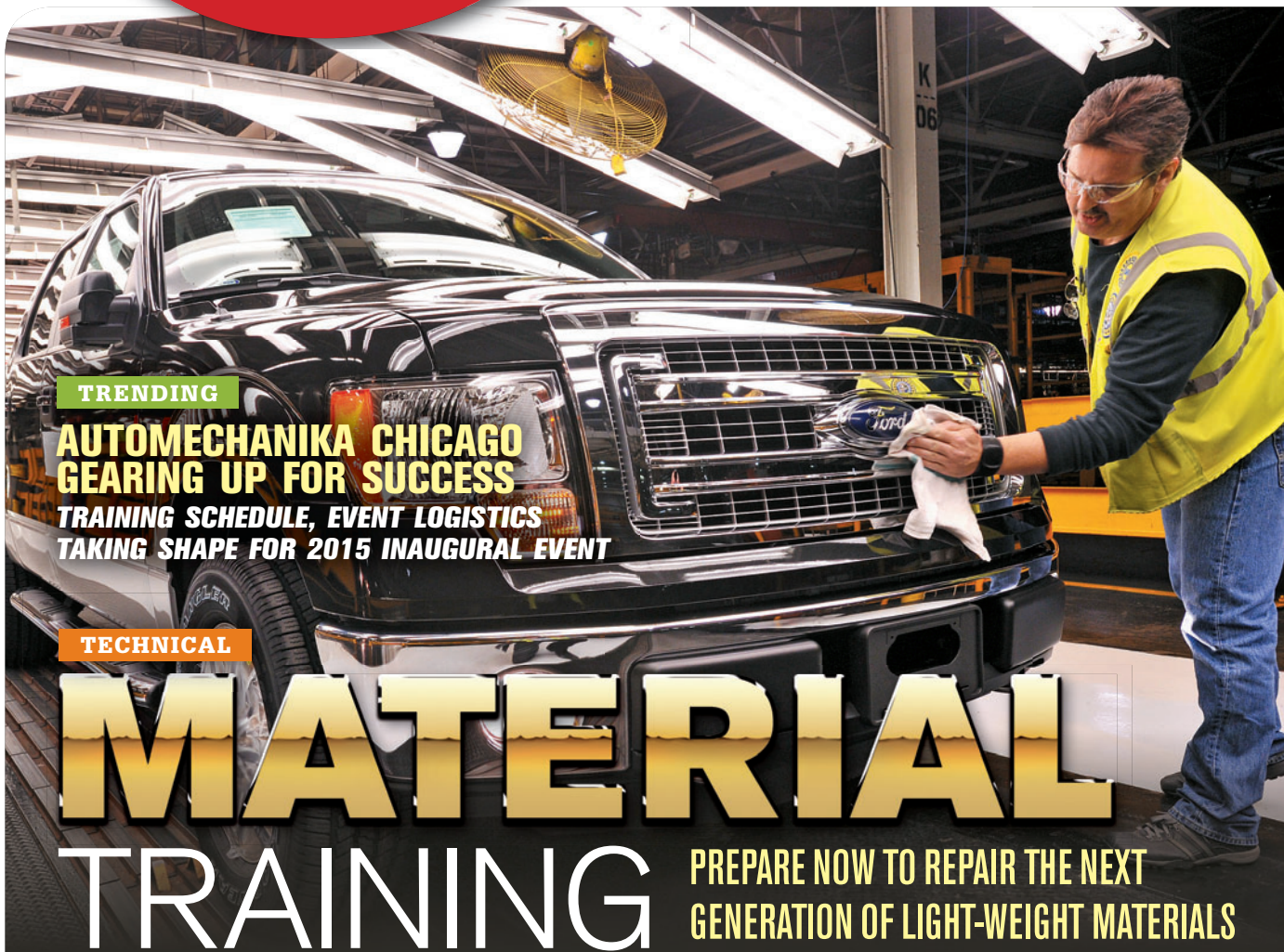
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NOVEMBER 2014



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TAKING SHAPE FOR 2015 INAUGURAL EVENT

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CHIEF SHEDS LIGHT ON VALUE OF PROCESSES

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GETTING OFF THE HAMSTER WHEEL
TAKE ADVANTAGE OF NEW LEAN OPPORTUNITIES
TO SEE DIFFERENT RESULTS IN YOUR SHOP

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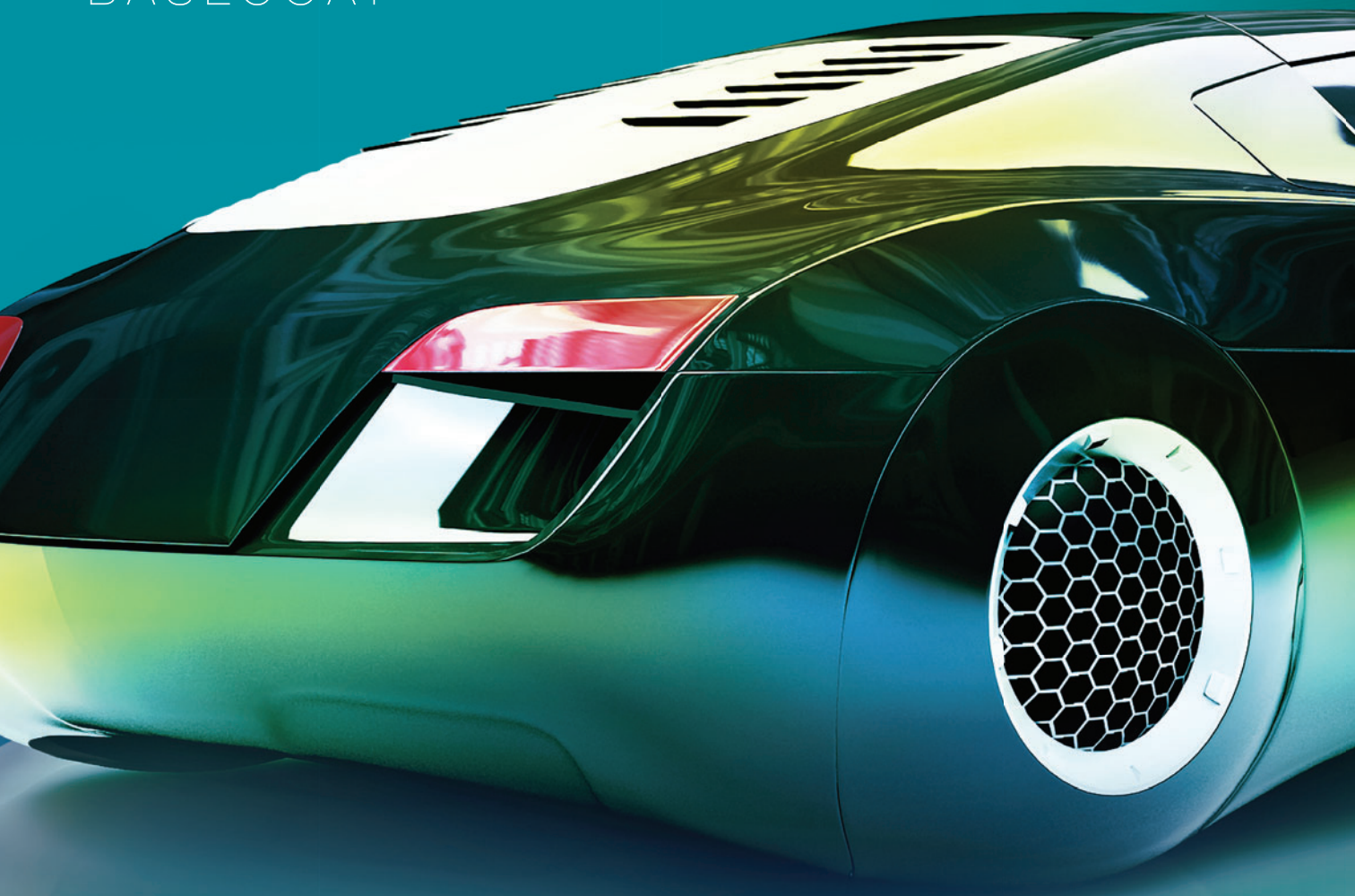
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ANALYSIS

AUTOMECHANIKA CHICAGO GEARS UP FOR SUCCESS

BY KRISTA MCNAMARA | MANAGING EDITOR

Training opportunities are booming for shop owners and technicians as the first Automechanika Chicago, set for April 24-26, 2015, gets closer.

MVP CONFERENCE

MOVE BEYOND WHAT USED TO BE

10 Shops looking to maintain a competitive advantage should begin by focusing on the things they can control, says Peter Sheahan, keynote speaker at the Fall PPG Conference in Nashville.

TECHNOLOGY

COLLISION AVOIDANCE TECHNOLOGY TO FURTHER REDUCE CRASHES

10 Safety and collision avoidance technologies will continue to reduce crashes and severity, drastically impacting the collision repair industry.

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FEATURE

MANAGE THE REPAIR PROCESS THROUGH MULTIPLES

BY MICHAEL WILLINS | ABRN CONTENT DIRECTOR

Measure twice, cut once — An old adage among craftsmen has a place in the shop.

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THE SHOP OWNER

BY MIKE LEVASSEUR

SCARY, BUT NECESSARY, THOUGHTS

18 If you aren't thinking regularly about your shop's liability, you probably should be. Every day, all of us are putting drivers and passengers back into vehicles that they count on to be repaired right.

THE LAST DETAIL

BY MIKE ANDERSON

NO STANDARD SET UP AND MEASURE TIME

82 A single labor time for every vehicle in every shop makes no sense, given the variables. First, the process that is required varies by vehicle. The only thing that every vehicle has in common is starting it up and driving it into the shop. Second, set up and measure time also varies by how you are measuring the vehicle.

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BY KEVIN MEHOK | CONTRIBUTING EDITOR

Maintaining a variety of client relationships, and therefore repair types, can help to ensure shop success.

IN THE NEXT ISSUE OF ABRN

We honor the winners of the 2014 Top Shops Contest and showcase what sets them apart in the industry.

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ENNEKING AUTO BODY; BATESVILLE, IND.
JAMES E. GUYETTE / CONTRIBUTING EDITOR

30 Shop success is spurred by a focus on being true and fair.



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DO YOU HAVE A STAFFING PROBLEM?

TOM MCGEE/ CONTRIBUTING EDITOR

28 Find the employees your shop truly needs and train them well — your business is counting on it.

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TECHNICAL TRAINING

BY TIM SRAMCIK | CONTRIBUTING EDITOR

Shops need to prepare now to repair the next generation of lightweight materials, or they will be out of touch and missing business and profit opportunities.

TECHNICAL FOCUS

ADVANCED JOINING METHODS TODAY

BY SCOTT VANHULLE | CONTRIBUTING EDITOR

48 With vehicle changes, learn new ways of thinking



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FROM ABRN CONTRIBUTING EDITOR AL THOMAS.
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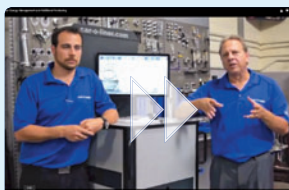
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BLOG SPOTLIGHT

BREMBO LAUNCHED a dedicated range of aftermarket integral and composite brake discs, which features high performance technical innovations including specific materials, dedicated venting solutions and customized machining of braking surfaces. Brembo guarantees top performance from these products even in extreme conditions. The new aftermarket range, which will be expanded over the coming months, already covers top models of brands including Porsche, Audi, Mercedes-Benz, Aston Martin and others.

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BUSINESS SUSTAINABILITY KEY TO FUTURE SUCCESS

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NHTSA MOVES FORWARD ON V2V COMMUNICATIONS TECHNOLOGY

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INDUSTRY TRADESHOW

Automechanika Chicago gears up for training success

Training opportunities are booming as the first Automechanika Chicago, set for April 24-26, 2015, gets closer.

ABRN, Motor Age and Messe Frankfurt will be presenting an all-new tradeshow, featuring more than 120 training sessions over the 3-day event. Automechanika Chicago is designed specifically for automotive collision repair and service shop owners, technicians, distributors, jobbers and more.

With the most extensive training under one roof, Automechanika Chicago provides techs and shop owners the best value for advanced training. The show boasts courses from top trainers in the industry including Mike Anderson, Larry Montanez, Frank Terlap, Tony Passwater, Danny Sanchez and Bob Greenwood, along with classes from AkzoNobel, Sherwin-Williams and VeriFacts, among others.

In partnership with TST and ATSG, Automechanika Chicago will also feature a vast selection of mechanical training courses, with new sponsors, trainers and classes being added daily.

Registration is free and just a few simple steps away at ABRN.com/AMCregistration.

BREAKING NEWS CONFERENCE COVERAGE

PPG: MOVE BEYOND WHAT USED TO BE

BY MICHAEL WILLINS |
CONTENT DIRECTOR

NASHVILLE – Shops looking to maintain a competitive advantage should begin by focusing on the things they can control, not what they cannot.

Peter Sheahan made that point abundantly clear during his opening keynote address to some 400+ attendees at the Fall PPG MVP Conference at the Gaylord Opryland Hotel in Nashville, Tenn. The event featured several primary speakers, including Sheahan, as well as a series of breakout sessions that addressed core collision shop issues.

In his remarks, Sheahan told the audience to avoid getting wrapped up “in the way things used to be” or the way you’ve always done things.

Shop operators must

Photos: Advanstar

CUSTOMER SOLUTIONS

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Vitor Margaronis

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Some quick observations
from our team managers

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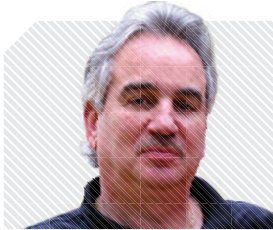
WITH THE ECONOMY REBOUNDING, many of our customers are focusing on growing their business and improving their efficiencies. With this in mind, I want to introduce you to some of the business services BASF offers to help our customers grow their bottom line.

In this publication you'll learn about the BASF Advanced Process Solutions, Performance Groups, SmartTRAK color tools and VisionPLUS OnLine. Each of these services was developed to make your life easier and help you improve your business.

Please take a moment to review these stories and hear, first hand, how customers are benefiting from their relationship with BASF. If you're interested in growing your business be sure to ask your BASF sales representative for more information. And if you're not a BASF customer, I encourage you to visit www.basrefinish.com and learn more about what BASF has to offer.

VITOR MARGARONIS // Marketing Director, BASF Coatings Solutions

REFINISH LEADERS // SOME QUICK OBSERVATIONS FROM OUR TEAM MANAGERS



TOM HOERNER

*Strategic Initiatives,
Business Solutions Leader*

When I am asked why APS is catching on I think back 10 to 15 years and realize the industry had no pressure to change the way we fixed cars. Today things are very different. Insurance companies are demanding faster cycle times and reward high performance with more work. And in this declining market I haven't been in a shop in the last five years that didn't need/want more work. So the simple answer is survival and growth. Both come from outperforming the competition. Work goes to those who "earn it," not who simply need it.



CRAIG SEELINGER

VisionPLUS Program Manager

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ERIC HEISLER

eBusiness Product Manager

The biggest change we are seeing in color matching is the push to do it electronically. Color chips are a great visual tool but by utilizing electronic solutions such as spectrophotometers, the speed to color match can be greatly improved. I have been in a lot of shops where our color tools hang on the wall and while they are still being used heavily they are often used in conjunction with our spectrophotometer solution, to quickly dial in a couple of color chips to visually compare against the vehicle to be painted.



MARCOS CORRADIN

Senior Marketing Manager

The main objective of BASF Value Added Tools and Services is to help our customers be more successful. The customer's success is our success. I can talk for hours about our tools and services and excellent products. When our customers talk about their success, now that's another story! Our sales team took a prospective customer to see Dunshee's Auto Body, one of our first APS shops. Joe Townsend, Dunshee's general manager, was so enthusiastic with the positive change APS had on his business, the prospect signed the deal on the drive home. Stories like that are why we provide Value Added Tools and Services.

A Healthier Bottom Line

Continuous workflow leads to continuous business

→ **“THINGS WERE GOING WELL** at the shop,” says Kurt Johnson, owner and general manager of Cornforth Campbell CARSTAR in Puyallup, Wash. “Our customer management numbers were solid. And the shop was performing well in most KPIs by industry standards. We weren’t suffering with employee retention concerns — the culture was good.”

By all measures, including 15 consecutive years of being awarded the AAA Washington “Top Shop Award,” Cornforth was performing well. Even so, Johnson decided to implement BASF’s Advanced Process Solutions (APS), a program that necessitates a shop to make wholesale production and culture changes with an emphasis on continuous workflow by eliminating issues that interrupt workflow.

So why take a step that was sure to disrupt a repair process that had been in effect for years? In answering the question, Johnson reflects back on the APS launch meeting in which the subject of how much change has taken place in the business over his career and in particular the subject of direct repair.

“If we had not seen the trend coming with direct repair and aligned ourselves with key insurance partners, we likely would not have seen the growth that we have enjoyed.” And he adds, “Or perhaps even exist today.”

Shifting into gear

More typical candidates for APS are those shops that were stuck in neutral and hadn’t yet found a solution to remedy the problem. For example, Al Fortin says the challenge for him, which has frustrated him for the last 20 years, was

growing the business while at the same time keeping a high level of quality.


“We’ve tried a number of different lean concepts by implementing procedure after procedure, but they never seemed to stick, explains Fortin, who is owner of Cascades AutoBody, Inc. in Sterling, Va. “The frustration has been that I didn’t have the knowledge or time to create a thorough keys-to-keys process and then make sure there are ‘visual triggers’ that hold everybody accountable.”

Because of the visual triggers, such as blueprinting, windshield notes and specific parking spaces for specific stages of process, Fortin says, “You don’t have to stop what you’re doing to ask a question or try to track down an answer so that you can proceed with repairing a vehicle.”

Like Kurt Johnson, Fortin felt the pressure from the insurance carriers.

GAME CHANGER

Built on Lean fundamentals, Advanced Process Solutions (APS) is a customizable repair process for continuous workflow, which can eliminate issues that lead to interruptions and inefficiency. Users can expect a drastic reduction in number and size of supplements, rapidly increased touch times, and significantly decreased cycle time performance, as well as satisfying insurance expectations. Proper implementation of the program assures payment for all operations that are performed which can lead to more profits.



Kurt Johnson (left), owner of Cornforth Campbell CARSTAR in Puyallup, Wash. talks with **Danny Rodriguez**, operations manager. Even though Johnson’s business was doing well, he decided to implement BASF’s APS program because of the changes he was seeing in the industry.



Joe Townsend, general manager of Dunshee Auto Body and Frame, Kalamazoo, Mich., has embraced the DFR process because it has eliminated shop “chaos” and has pleased the insurers.

He says the carriers are monitoring on a daily basis KPIs such as cycle time, touch time, supplement ratios and percentages, average estimate amounts and CSI surveys.

With a sigh of relief, Fortin says, “Our KPIs have improved every month since we launched APS.”

Joe Townsend, too, was attracted to APS for its promised efficiency; however, the general manager of Dunshee Body and Frame in Kalamazoo, Mich., says there was a deeper underlying reason for his desire to make changes in the business — he was seeking a competitive edge. “We had been doing business the same way for years and years and were kind of stuck in a rut. In this day of consolidation, we decided we needed to do something to try to make ourselves stand out from the rest.”

A main attraction for Townsend to APS was that it’s not a one size fits all approach; rather, Townsend sees it as being very flexible and tailorable. “It is easily customizable to your facility. Whether you’re working as a team or as individual technicians, this program can work for you. The blueprint is there, you and your management team and technicians can decide which direction is best.”

By implementing APS, Townsend says that APS has eliminated the “chaos” created by his old model that identified items late in the process which delayed it. This was remedied



At Cascades AutoBody Inc. in Sterling, Va., a DFR tech and helper work together disassembling a vehicle prior to estimate. Complete disassembly before the repair begins is a key part of the APS process.

by implementing the DFR (disassembly for repair) process, which saves time for everyone, including insurers.

And the benefit for Townsend doesn’t end there. He’s doubled his touch time and has knocked 2-3 days off cycle time. “By doing this,” he says, “we have been able to have our employees make more money without labor rate increases.”

The shock is good for culture

Just about any shop owner will tell you who has implemented APS, “it will turn your shop upside down” or “it’s quite a culture shock.” But they will also tell you that they wished they had signed on from the very start because it’s a shakeup their shops needed. Rather than taking a repair through the complete process, employees are asked to adapt to new roles.

Fortin says he actually looked for reasons not to implement APS for fear of losing employees who were reluctant to change. He says what sold him on implementing APS was the commitment BASF had to the program. “I was assured that if we were fully committed our BASF APS team would be by our side throughout the entire implementation. We launched March 17 and to this day they are still closely watching us both through our management system and on site.”

With the challenge of upsetting his employees, Fortin moved forward



The Cascades AutoBody team meet to discuss vehicle tracking. Pictured (L-R) are **Craig Schifbauer**, manager; **Young Pokphanh**, service writer; **Pete McDermott**, service writer; and **Al Fortin**, owner.

by reviewing obstacles and sharing them with the BASF staff members. Together, they developed SOPs that would eliminate or soften the obstacles. Then they met with employees to explain the new procedures to them, plus ask them for their input on implementing them. “It is very important that each staff member feels they are involved in the entire process,” emphasizes Fortin. “After all, the changes are being made to make their job easier and more lucrative.”

Now everyone sees the benefit of APS. “We haven’t even finished with adjusting to the program and the numbers for our largest insurance carrier are through the roof,” exclaims Fortin. “CSI is 100 percent, cycle time is 4.2 days and touch time is 4.8 hours a day.”

Kurt Johnson, who advises his peers to adopt APS “without hesitation,” says people like to work efficiently and like improvement when they can see personal benefit. “There are no mandates in APS that would create a negative response from your team. Although many elements require close adherence, others are customized or adapted to your workflow.”

What’s most important to Johnson is a healthier bottom line by improving touch time by 29 percent, while decreasing cycle time by 22 percent.

“These are good numbers, but the optimist in me really believes we’re just getting started.” ■

Value-added Products That Are *Invaluable*

THE ROAD TO PERFORMANCE

→ **"SINCE BEING IN THE GROUP,** we've increased \$2 million in four years and quite honestly, I couldn't do it without the group."

That's how 36-year industry veteran Jerry McNee sums up his involvement with one of BASF's Performance Groups. McNee, owner of Ultimate Collision Repair, Inc. in Edison, N.J., says he was "just fumbling through the business" until he joined a BASF Performance Group.

"I knew some of the numbers but wasn't really sure what it really took to run a business...although I was doing it year after year. If I had to do it all over again, I would have joined (the group) right from the start. I've been with other Performance Groups and BASF's is by far superior."

A shop owner who joined a BASF Performance Group early on is Jim Siegfried, co-owner of Crystal Lake Automotive, Inc. in Lakeville, Minn.. He says that since joining the group in 2004, it has assisted his business in



Jim Siegfried (left), owner of Crystal Lake Automotive Inc., Lakeville, Minn. and **Troy Knopik**, BASF account representative, chat about BASF's new fast curing UV primer. Siegfried has been a Performance Group member since 2004 and credits it for helping evolve his business.

evolving to meet the current needs of his customers and community.

Interestingly, Siegfried adds that group members are held accountable by their peers. "They want us to succeed which helps take the fear out of trying something different. We have less internal stress because the group challenges and supports our efforts."

"One of the most valuable aspects of the meetings is the shared knowledge from all members," says

Joe Townsend, general manager for Dunshee Auto Body and Frame in Kalamazoo, Mich. "We have members from all over the country that have very successful businesses and we are all willing to share ideas and techniques to ensure our success."

Mark Kirk, director of Collision Centers Operations for the Larry H. Miller Dealerships (LHM) in Sandy, Utah (consists of 53 dealerships in six states and seven collision centers), says the



VisionPLUS

Ron Nagy

PERFECT VISION WITH VisionPLUS

→ **"PRICELESS."** That's how Ron Nagy describes BASF's VisionPLUS OnLine (VPOL), a program that he's used for almost 10 years.

"I literally would not want to try to run my business without it because it checks and measures all KPIs. It is the complete website toolbox to run your

business," says Nagy, owner of Nagy's Collision Centers in Orrville, Ohio.

As a nine-shop MSO, Nagy says he can compare numbers for all of his shops, as well as those in his Performance Group and the top 75 percentile of shops so they can see where they stand. He says a number of KPIs are automatically calcu-

ON TRACK WITH SmartTRAK

→ **A FEW MONTHS AGO**, Shane Sisk says his company was able to acquire a competitor's account that was having major issues with the inability to keep adequate stock of everyday products, as well as the lack of means to job cost individual repair orders.

Sisk, technical service specialist for Micro Auto Paint & Plating (one of the first paint supply companies to sell BASF products exclusively), says, "During a short demo, we installed BASF's SmartTRAK program showing our potential customer a new way of producing invoices to help them negotiate paint material costs with insurance companies."

After securing the new account Sisk says they implemented SmartTRAK's inventory feature which allowed the painters to have real time updates of their in-shop products and automatic updates of the system to generate all future orders, therefore, eliminating lack of stock issues. This, of course, allows both BASF and Micro customers to manage paint usage to help understand the exact financial cost per job in addition to adding an invoice, therefore, providing a better understanding of the total profit and invested cost.

Jay Prewitt, general manager of Auto Body Service Centers in Sterling Heights, Mich., concurs with Sisk when he talks about the SmartTRAK IV program his company is using. Sisk says it is very pragmatic because it enables him to compare actual material costs that are used on the repair job to their estimates and the material dollars estimated to complete a job.

This has been a huge benefit, Prewitt says. "We have in several instances had estimates that have reached the allowed material threshold; however, we've been able to print a detailed invoice from SmartTRAK IV showing the required materials for those jobs. We then present these invoices to the insurance personnel and have received additional dollars based on these invoices."

When it comes to job costing, Prewitt says SmartTRAK IV has helped him gauge the amount of material mixed for their jobs. "Our painters are able to see the associated costs with all of their mixes. This allows them to contain the costs as they see the actual costs of the mixes and may scale back when mixing." ■



Micro's **Shane Sisk** (left) visits with customer **Edward LaBelle**, refinisher at Global Impact Solutions.

Performance Group is one of its most useful tools by bolstering its leadership capabilities. "Since joining the BASF Performance Group it has helped our team members and myself to become better managers and leaders."

Ultimately, becoming better leaders frees up time to think about growth. "By focusing on our KPIs, they have gotten better and we can focus on other areas of opportunity for our business."

Kirk says that between LHM's involvement with the Performance Group, APS and VisionPLUS OnLine, it has shown improvement in shop operations and customer service. An added plus, Kirk says, is that they have added several new insurance carriers.

Bill Johnson, owner of Empire Collision in Edmonton, Alberta Canada likens his Performance Group as a meeting where each member takes their turn as the CEO talking to their shareholders ultimately looking for solutions to pressing problems.

"We all come with different ideas on certain subjects from sales and marketing to managing paint and applied products," Johnson says.

By using what he's learned from Performance Group members, Johnson has greatly increased his sales. "We needed a lot of improvement in KPIs. We were at \$18 a square foot in sales. By getting input from the group, VisionPLUS (see page 6) and going over the financials, we set a target of \$27 and reached \$25." ■

lated with no separate work involved.

VPOL is directly responsible for Jim Fitzgerald's MSO business being able to go to a four-day work week. When Fitzgerald, owner of Fitzgerald Automotive Group, Inc. in Monroeville, Ohio, changed his culture to a team he started to pay the techs as a team.

"We pay weekly so we pool all of our flat rate hours for the week, says Fitzgerald. "We then go to VPOL and pull up BASF's Pay Generator and it splits the flat rate hours to team members based on actual hours worked. This has allowed us to go to a four-day work week and a continuous flow of repairing cars because

everyone is teamed up on all jobs."

Fitzgerald says if you have any problems, you can quickly see them just by using the standard VPOL report, which he says he uses "religiously." It provides him with a year's worth of sales, costs and profits for "every category known to the collision industry." ■

PEERLESS FINISH THAT STANDS UP TO THE MOST DISCERNING EYE



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>> CONTINUED FROM PAGE 10

AUTOMECHANIKA CHICAGO GEARS UP FOR TRAINING SUCCESS

More than 8,500 automotive aftermarket shops owners and techs are expected to attend Automechanika Chicago. As a manufacturer, put your product, service or brand right in their hands by being part of this new tradeshow. Automechanika Chicago offers an extensive array of booth packages at competitive prices. Exhibitors looking to reserve their booth space can visit ABRN.com/AMCexhibitors.

Chicago is the premier destination for shops, as it is centrally located within a 500-mile radius of one-fourth of the

country's collision and automotive repair shops. With two international airports, Chicago is convenient with round-trip flights less than \$350 for most US cities.

Automechanika Chicago has partnered with many downtown hotels to offer attendees accommodations for many different budgets. Hyatt McCormick Place is a short walk across the sky bridge to the convention center. For those looking to stay downtown, there are many hotels that also offer a convenient jumping point to the McCormick Place direct shuttle line, allowing you to skirt those taxi lines. Get

more information on your hotel options or book a room at ABRN.com/AMChotels.

Occurring every other year in April, Automechanika Chicago doesn't interfere with the automotive industry mainstay tradeshows. As a biennial event, automotive technicians will receive the latest training to update their skill set within a timeframe that isn't a burden on their business.

Stay up to date on the latest Automechanika Chicago developments and news by subscribing to the show newsletter at ABRN.com/AMCsubscribe.

>> CONTINUED FROM PAGE 10

PPG: MOVE BEYOND WHAT USED TO BE

explore ways to make their customer experiences superior and extraordinary, and to find ways to adapt to external pressures.

Sheahan also advised the audience to take a good look at global trends that will eventually impact the North American market. "If you want to know what this industry will look like in five, 10 years time, look at what's on the periphery," he stated.

As an example, he cited the current explosion in interest related to aluminum and the Ford F-150. Shops suddenly are interested in learning about aluminum repair processes despite the fact aluminum was in the works for decades. "The opportunity or challenge is usually hidden in plain sight," he added.

Aluminum actually appeared in vehicles in limited amounts for years. In 1975, average aluminum content per vehicle was 75 pounds, compared to 350 pounds per vehicle in 2012. At a ratio of 3:1 (steel vs aluminum), that's 1,050 pounds of steel parts being replaced in those 2012 vehicles.

In 2015, average aluminum content per vehicle is expected to reach 425 pounds, said Mark Bono, an I-CAR instructor who has specialized in aluminum training since the mid-'90s.

"When you don't see aluminum every day, when it's not in your shop, how much concern do you want to give it?" said Bono, during his breakout session, "Aluminum: The Future of Automotive Design." Aluminum is no longer restricted to high-end luxury vehicles or limited in usage. By the end of this decade, seven of the top 10 new pickup trucks produced in North America will be aluminum bodied, he said.

During another breakout session, "Estimate Evolution" trainer John Fagan explored new technologies like aluminum that are challenging professional estimators tasked with writing a thorough visual estimate and minimizing supplement frequency. But technical knowledge is only part of the equation for estimators. Statistically they are responsible for 67 percent of a customer's shop experience (i.e. CSI).

Fagan said estimators must be viewed as first-level greeters focused as much on customer service, with an ability to overcome negative industry stereotypes, as they are on writing proper estimates. "They need to have skills



Peter Sheahan

to work with and understand our customers. They have to build trust," he told session attendees.

The conference was once again a sellout and attendees enjoyed several guest speakers and breakout sessions. Add to that the unmeasurable value of networking between sessions and at the evening galas with other collision center owners and managers that share the same passion and desire to move their business forward.

"We are completely committed to deliver the relevant and essential content that our customers need," said Jim Berkey, Director MVP Business Solutions. "We will continue to provide a venue and experience to help our customers learn and grow."

The 2015 MVP Spring Conference will be held April 26-28 at the JW Marriott Desert Springs Resort & Spa in Palm Desert, Calif., where another sellout is expected.



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COLLISION REPAIR INDUSTRY Stats & Trends

8,500 shop owners and technicians are projected to attend the inaugural **Automechanika Chicago**, April 24-26, 2015. The event will be held every other year.



Manage the repair process through multiples

Measure twice, cut once – an old adage among craftsmen has a place in the shop

BY MICHAEL WILLINS | ABRN STAFF

There's an old adage among contractors and carpenters – "Measure twice. Cut once." By measuring twice before cutting into a piece of wood, a sheet of drywall or any number of materials, costly mistakes can be avoided (both in time wasted and material costs). It's a simple concept to understand that's not always simple in practice.

It's easy for veteran craftsmen to feel such precautions aren't necessary. There are those who consider second measurements to be a waste of time, because "I've done this for years" or "I know what I'm doing" or "It's just a few simple cuts."

Sound familiar collision repair folks?

Multiple measurements

Recently I went through training along with fellow journalists at Chief Automotive Technologies



in Madison, Ind. The team from Chief's Vehicle Service Group (VSG) recognizes the importance of measuring each vehicle, before, during and after a repair. Why? To put it simply, you'll improve cycle times by identifying all the damage in the initial inspection.

"You get all the parts you need on order. And you don't get into the repair and find out later you need something else," says Lee Daugherty, global data product manager.

Locating damage after a crash is a process. Cutting corners when measuring lumber can have negative consequences, but most of the time that negligence doesn't put people at risk. The same can't be said for collision repair. Hidden damage

Continues on page 14

abrn.com BEST OF THE BLOGS

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Shop buys Wedge Clamp

SANDY CALDWELL

He liked the product so much, he bought the company.

"Nothing on the market compares to it for speed, accuracy and ease of operation," says Bill Hatswell, the new owner and President of Wedge Clamp Systems Inc., manufacturer of an innovative, lightweight and economical autobody repair system.

"We've been exclusive users of the Wedge Clamp System since it was introduced," says Hatswell, whose 36-shop Craftsman Collision is the largest privately held bodyshop chain in North America.

Wedge Clamp is also the worldwide distributor of NitroHeat, a spray painting system that replaces air with heated nitrogen

that is said to dramatically reduce paint consumption and drying times while delivering a more lustrous and durable finish.

The purchase is also good news for Craftsman customers, says Hatswell.

"As an industry leader committed to having the best technology, we know that both Wedge Clamp and NitroHeat add to our advantage over other shops in terms of repair quality and vehicle finish."

Craftsman's purchase of Wedge Clamp includes the firm's well established Asia headquarters in Suzhou, China, where a model training facility showcases the wonders of Wedge Clamp for visiting technicians.

"Car sales in China are 20 million a year, but after-sales service

lags far behind," says Frank Liu, Wedge Clamp's General Manager of Business Development in China. "With a successful Craftsman Collision business model and sufficient capital support, Wedge Clamp can establish its sales distribution network all over China."

Wedge Clamp will also be establishing an office and showroom in Los Angeles in 2015, says Hatswell. For further information about Wedge Clamp or its products, phone 1-800-615-9949, visit www.wedgeclamp.com or email info@wedgeclamp.com.

innovation awards

PETER F. MEIER

The winners of the 2014 Automechanika Innovation Awards have been chosen. In late sum-

mer, an independent jury of eight experts agreed on the seven winners whose innovative solutions and future-oriented products were to be honored and shown at Automechanika Frankfurt. The winners were selected from 120 entries, 66 of them from Germany and 54 from other countries.

The awards were presented during the Automechanika Frankfurt opening ceremony in September and visitors will be able to see the award-winning products from each category at the Innovation Awards exhibition in the foyer of Hall 4.1 throughout the fair.

Find out who went home with top honors. Continue reading at ABRN.com/AFawards.





Innovation
that excites



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November 12, 2 p.m. EST

Expanding across state lines



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THE SHOP OWNER

MIKE LEVASSEUR

Scary, but necessary, thoughts

PAGE 28



THE PROFIT MOTIVE

TOM MCGEE

Do you have a staffing problem?

PAGE 82



MIKE ANDERSON

No standard set up and measuring

Manage the repair process through multiples - Continued from page 12

exists, especially in this day of new vehicle engineering, which forces crash energy to travel around the passenger compartment to other parts of a vehicle. A front-end hit can cause damage to the rear of the vehicle and only by properly measuring the vehicle can a technician discover everything that needs to be repaired.

For that reason Chief recommends technicians measure a minimum of eight points on a damaged vehicle – two in the front, two in the rear and four in the middle of the vehicle. With front-end collisions, 14 to 16 points should be the norm.



Pulling it all together

Richard Perry, global repair product manager, explained that monitoring measurements, especially during the pulling process, is vital to avoid repairing one section and causing another area of the frame to get misaligned. He suggests using multiple pulling locations to avoid putting too much pressure in one spot.

To think of it a little differently, consider pulling on a piece of paper at one single point on the edge of one side. Chances are the paper will tear. If you pull evenly along several spots on that same edge of the paper, the risk of tearing the paper lessens. There's less stress at each pulling point with multiple positions and, says Perry, "we can reduce the amount of pressure at each hookup and we can increase pressure on the vehicle."

"I want to figure out how to pull as much of it out as I can at one time based on how it went in," he added.

Properly analyzing a repair (i.e., measuring twice) before the repair process can help shops avoid those costly mistakes. ■

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NOVEMBER 12

Crossing The Border: Tips for Expanding Your MSO Across State Lines

Most MSOs have experienced shop acquisition or added shops through greenfield development. After the first shop addition, we develop knowledge and confidence, and know what to expect. But what about when you go across state lines into another market? What is different? What do we need to look at? How do we prepare?

NOVEMBER 15

Mastering Voltage Drop Testing

Learn this dynamic test that can quickly help you pinpoint the majority of electrical problems you face daily – and do it quickly and efficiently. Produced in cooperation with TST.



ONLINE EVENTS

Ensuring DRP Compliance

Darrell Amberson, director of MSO Relations, discusses ways to stay compliant with DRP agreements while still maintaining a profitable business model.

Visit: ABRN.com/DRPcompliance

Study: Digitally Empowered Customers Driving Change

A recent AudaExplore survey gauges the industry perspective of technology in the shop and its impact on collision repair.

Visit: ABRN.com/AEvideo

Suspension Diagnostics in the Shop

Pacific Collision Equipment's Robert Hornedo reviews the importance of suspension diagnostics.

Visit: ABRN.com/CarOLinerSuspensionCheck



STREAMING PROGRAMS

NOVEMBER 4-7

SEMA Las Vegas, Nevada

NOVEMBER 6

Collision Industry Conference Las Vegas, Nevada

NOVEMBER 12-15

Automechanika Buenos Aires Buenos Aires, Argentina

JANUARY 14-16

Collision Industry Conference Palm Springs, California



INDUSTRY CALENDAR



Noteworthy

READER FEEDBACK TO ONLINE ARTICLES

James Moy, senior consultant,

Precision Auto Group Inc.: When adhesive bonding, some manufacturers state that the set up should not be moved for X amount of hours. This time can be decreased if I pushed the bench into the spray booth and bake it. Since I cannot charge labor time while it is curing, what can I charge for bench rental?

Michael Pollak, independent auto insurance claims professional:

If you are losing bench time, you need to charge for that. Accommodate this in the labor rate you charge for frame time and footnote the charge so that if you are challenged, you have proper documentation for the fee.

Bruce Laidlaw, industry consultant: Maybe some "mutually agreeable flat fee" for curing time should be agreed upon up front and/or posted (with the proper handout explaining how you arrived at the fee. At least a generic charge is better than a "No" from the appraiser and you get nothing.

Joe Fisher, owner, J. Lee Automotive Industry Equipment: The bench should not be tied up like this. The bench is for structural use only.

James Moy: Joe, for example, if I am gluing in a rail, I need the rail held in the correct location with either a jig or the Car-O-Liner EVO while the adhesive is being cured. The rail needs to be fully cured before I can proceed with additional procedures. I can't install the rail, rear body and quarter at the same time.

Joe Fisher: I do not know of any vehicle that we should be gluing the frame rails together on.

Larry Montanez, collision damage analyst at Lange Tech and co-owner of P&L Consultants: OEMs like Porsche, BMW, Audi, VW, Bentley, Rolls Royce, Aston Martin, Lamborghini and some others require certain vehicles remain affixed to the structural realignment apparatus with all jigs or fixtures in place until the adhesive has cured. Those machines that are approved would be Celette for almost every OEM, and then some allow Car-O-Liner, CarBench or Global Jig. Time limits can be 8-24 hours before the vehicle can be moved off the apparatus.

Joe Fisher: To those who are using adhesive to attach panels, I can't believe it. Continue reading at ABRN.com/BenchCharge.



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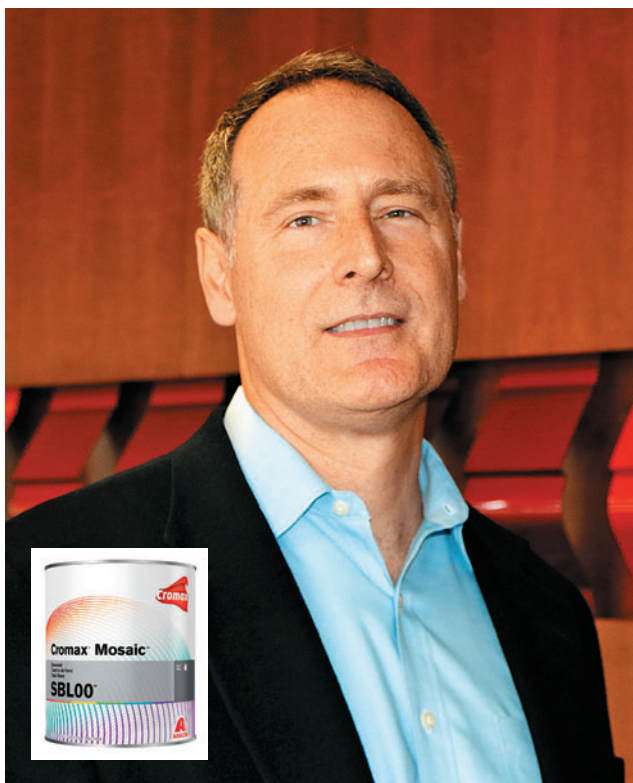
¹2013 Aflac WorkForces Report, a study conducted by Research Now on behalf of Aflac, January 7 – 24, 2013. ²Eastbridge Consulting Group. U.S. Worksite/Voluntary Sales Report. Carrier Results for 2012. Avon, CT: April 2013. Coverage is underwritten by American Family Life Assurance Company of Columbus. In New York, coverage is underwritten by American Family Life Assurance Company of New York. Worldwide Headquarters | 1932 Wynnton Road | Columbus, GA 31999

Q+A WITH HARRY CHRISTMAN

MARKETING MANAGER,
AXALTA COATING SYSTEMS

AXALTA SOLVENTBORNE BASECOAT MEETS LOW VOC REGULATIONS WHILE PROVIDING BRILLIANT COLOR, LOWER COST

BY KRISTA MCNAMARA | MANAGING EDITOR



ABRN: Tell us about what Cromax® Mosaic™ offers to paint shops.

HC: Cromax Mosaic is a basecoat designed to help shops meet low VOC regulations with almost no change to their current paint processes. Because Mosaic is solventborne, not waterborne, it sprays, blends and dries like solvent basecoats shops are currently using. Waterborne typically requires blowers to generate the air movement needed to accelerate drying in humid conditions. That can mean capital investment, new processes and new painting techniques. Not so with Mosaic. No major shop investment and minimal training can mean a quick transition to low VOC.

ABRN: How can this product help shops boost efficiency while cutting costs?

HC: Cromax Mosaic is solventborne, so it's priced like solvent, which is typically 25 percent less than current waterborne alternatives. Cromax® Pro, our waterborne basecoat, is priced at a slight premium over solvent, but offers coverage and speed advantages to offset the price. Mosaic covers in fewer coats and blends more easily than National Rule basecoats. That translates into less material used, less wait time between coats and less time spent on difficult blends.

ABRN: Shops often rely on paint vendors for shop management training. What are the biggest issues Axalta is seeing from its shops?

HC: The key question that a lot of shops may contemplate is "how do I beat my competition and win more business?" At Axalta, we recognize that our growth is tied to our customers' success, so we have a team whose sole purpose is to help our body shops improve their operations, grow and increase their profitability. We offer training in customer service, estimating, scheduling, and basic shop management. We also focus on helping streamline operations and improve efficiency using shop data and metrics to drive lean processes. We share techniques to help shops increase market share, and we have received feedback from shops who have expressed development opportunities in the following areas:

Coding. We advise shops to employ a process for accurately coding all paint and materials products they purchase. This process should involve the jobber to ensure that every item they purchase is assigned to the correct expense category, which helps control expenses.

Operational issues. The paint shop should adhere to a strict process when

mixing paint, choosing color, capturing work-performed-not-billed and purchasing materials. The key is to decide how the paint department will manage these processes and follow them as a team.

Application. As shops change technology or products, the application of these components can change, too. Painters need to modify their techniques to take advantage of the properties that these products/systems offer. The risks include increased cost and lower productivity.

ABRN: What kind of training does Axalta offer for shops using Cromax Mosaic?

HC: Mosaic is an alternative for shops that may not have capital to invest in major upgrades, nor the time to rework paint processes or send painters away for extensive training. Mosaic mirrors the application and blending techniques of the National Rule solvents shops spray today. Because of this, very little training is needed. And for the training that is required, we offer online, mobile device compatible e-learning modules that painters can watch whenever and wherever they want. Shops that switch to Mosaic will require Mosaic e-learning modules, plus a half day with an Axalta or Cromax technician, to be capable with this system. ☺

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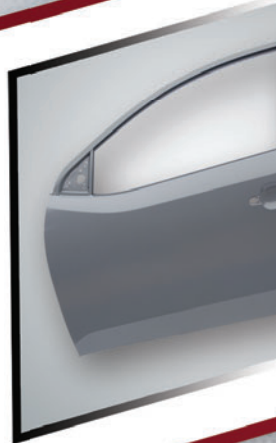
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Scary, but necessary, thoughts

If you aren't thinking regularly about your shop's liability, you probably should be

Here's the scenario: Mr. Jones has his late-model sedan towed to one of our locations after an accident. The estimated repair total is \$18,000 – not an insignificant repair by any means.

The job requires just about everything: unibody correction, weld-on parts, supplemental restraint work, suspension and other mechanical work including an alignment. A complete integral overhaul.

As the repair work winds down, we call Mr. Jones on Thursday afternoon and tell him his car will be completed by 4 p.m. the next afternoon.

"That's great," Mr. Jones says. "We're leaving for the weekend tomorrow, and I didn't really want to drive the rental car on vacation."

So the next afternoon, Mr. Jones shows up and completes the paperwork, and he and his wife put their two young kids into the repaired vehicle. Out the shop's driveway and a few turns later, the family heads up the freeway on-ramp for I-95 and is soon driving at highway speeds toward South Carolina for their vacation.

I don't know about you, but that whole scenario is something I think about every day. If you aren't frightened when you think about the liability placed squarely on our shoulders as collision repairers – or if you aren't thinking about it regularly – you probably should be. Every day,

“EVERY DAY, ALL OF US ARE PUTTING DRIVERS AND THEIR PASSENGERS BACK INTO VEHICLES THAT THEY COUNT ON AS HAVING BEEN REPAIRED RIGHT. ALWAYS THINKING ABOUT OUR LIABILITY AND THE SAFETY OF OUR CUSTOMERS FORCES US ALL TO REMEMBER HOW IMPORTANT IT IS TO DO THE RIGHT THING EVERY SINGLE TIME”

all of us are putting drivers and passengers back into vehicles that they count on as having been repaired right. In the case of our company, that's 1,300 vehicles every month, and many of those are the severe hits not unlike the one brought to us by Mr. Jones.

I think it's important that we in the collision repair industry regularly think about what that means for us. It's a scenario I share with every new employee during our orientation, and explain that it's a principle that must be applied to every repair.

Always thinking about our liability and the safety of that family forces us all to remember how important it is to do the right thing every single time. There's no room for a margin of error. I use the analogy of the maternity ward at any hospital; is there some acceptable number of newborn babies the nurses or other hospital staff are allowed to drop? Of course not. The only acceptable outcome is zero defects.

For us that means if it takes 240 welds to put a side panel on properly, doing only 230 isn't acceptable. That's like leaving out multiple bolts. If fasteners need to be torqued, they need to be torqued; you can't just use the airwrench and call it good. If something isn't aligned properly, it needs to be fixed, not hidden through some adjustment of panels.

It's essential to keep prompting your employees to consider how many of our customers are picking up their cars today and driving away toward home, work or a vacation, counting on that vehicle to drive, handle and respond as it was designed to do prior to the accident.

That thought is why we spend money on education and training. It's why we invest in the technology and equipment and information services that ensure we can do things right. And it's why we spend money on third-party verification that ensures we not only know what needs to be done, but are actually doing it.

If you're reading this column, chance are good this is a topic you understand and think about regularly. But share it with your employees as a reminder that attention to every detail is important to the safety and well being of your customers.

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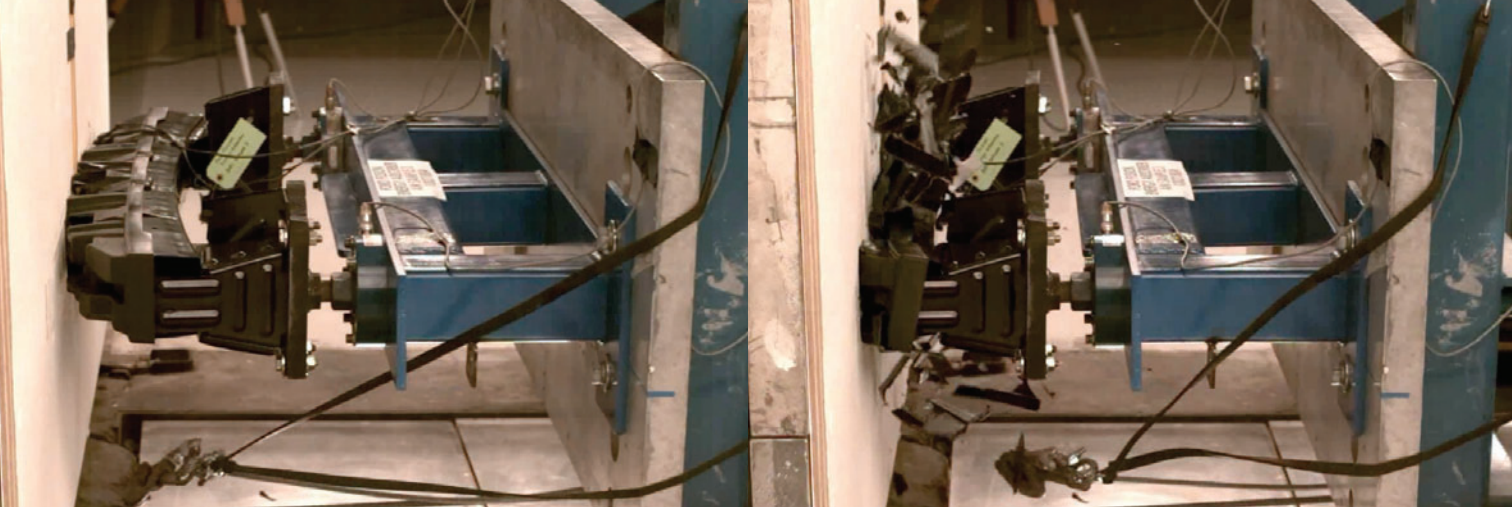
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If there's a topic you'd like me to address, I'd love to hear from you.



Mike LeVasseur is president and COO of Keenan Auto Body, which has 11 shops in Pennsylvania and Delaware.



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MINDING YOUR BUSINESS



BUILDING A DIVERSE CUSTOMER BASE

MAINTAINING A VARIETY OF CLIENT RELATIONSHIPS CAN HELP ENSURE SHOP SUCCESS

BY KEVIN MEHOK | CONTRIBUTING EDITOR

THERE IS AN old saying, "Variety is the spice of life," that may be true for certain aspects of life, but a slight variation is more fitting for collision shop owners and managers: "Variety is one of the keys to success."

By variety I mean diversity in the customer base you build as your shop grows. This diversity could be varied insurer relationships, different economic class customers, different age groups, geographical differences, or even different types of repairs. Many aspects make up diversity in your clientele.

Expand your services

If you market yourself as a paint shop, you will likely attract customers looking to do complete repaints on older cars, dealer work, or something along those lines. Although you may be capable of doing anything, your marketing efforts have minimized those abilities, and pigeon holed you to a segment of the available work, leaving the remainder of potential repairs to go to a competitor. If you further understand your close rate or capture rate is probably around 60 percent,

you are really narrowing the chances you have for success.

Simplistically, the average close rate for most shops is 55 to 75 percent. Having narrowed your potential by marketing your shop to a smaller customer base, you stand to capture only 55 to 75 percent of that already narrowed potential sale.

It is important to be open to and market yourself as able to do any type of collision-related repair or painting. By doing so, you will have the ability to at least bid for any type of work, allowing you to make decisions on a case by case basis.

Also, you should consider doing value-added services, like bed liners, custom stripping or window tinting. You don't have to actually perform these services yourself, but offer them to your customers, and sublet the work. Performing many different aspects of collision repair and painting will bring more potential customers to the door.

Grow your list of partnerships

I am a huge proponent of diversification in the partnerships you develop with direct repair insurance companies. I currently work with at least 15 different DRPs. One great thing

about working with so many companies is that you are exposed to many different types of customers. A claimant with one insurance company may wreck again later, and come to you with the loss. Also, it is highly unlikely that every insurance company with which you have a relationship will be slow at the same time. When one company is down, another one may be up, keeping your work-flow more consistent.

Explore every DRP potential available in your area. Fleets, ambulance companies, construction companies, cable installers and municipalities are all fair game. Generally fleets offer programs for vendors that operate much like a DRP, but cost a percentage of the sales to stay in the game. Not all of these companies are right for every shop. Look at the details of the program, and then analyze the fit. You can always say no to the job, but at least you are getting the work to your door. Again, this goes back to exposure and marketing. A fleet customer on a corporate repair may become a customer for life, if you service them well.

I actually have long term customers originally introduced to us by a construction company contract that we enjoy. Basically, you have to look at these types of repairs with an open mind and realistically. The repair process is still the same — you are fixing cars.

Align yourself with others

There are tons of automotive related businesses available to the consumer. Used car lots, new car dealers, parts stores, muffler shops, independent mechanical shops, and the list goes on. All of these shops, at one time or another, encounter customers that need collision repair, and on the obverse, you run into customers that require the services of one of these other providers. Why not become partners and scratch each other's back through referrals?

Think about this for a second. If you align yourself with a high-line import new car dealership, (provided you have the capability to repair these types of cars) are you not also expanding your customer base through economic class? Most high-line owners enjoy greater economic freedom and can generally afford to get repairs done when others cannot. Most dealers do not have

collision shops these days. However, many consumers drive right to the dealer when they wreck or damage their brand new baby. Why not have the dealership referring you, instead of the guy down the street? This is an area of huge untapped potential, especially if there aren't any or many opportunities for a DRP in your area. These re-

lationships are sometimes difficult to maintain, as other shops try to undercut your pricing. Many dealerships are easily swayed by promises and price, so you should always operate from a standpoint of quality and integrity. It will win out over price in the long run.

My shop gets work every day from several dealers, a few mechanical



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shops, our paint jobbers, and a couple auto parts stores. All of these referrals I would not normally get, if they were not coming from these sources. Once again, by working through these channels, I am growing my customer base.

Embrace technology

We have all been a part of the explosion in technology over the past few years. Some of us have looked at changes from afar, and some of us have been active participants. Embracing technology allows you to grow through its use, and with it. Younger consumers love technology. If you show your acceptance, and utilize all the technology has to offer in the collision industry, younger customers will gravitate towards your shop.

I recently spoke with AudaExplore about the programs they have developed utilizing technology to help grow your customer base. They offer a myriad of innovative programs designed to help you that don't require a huge investment on your part. AudaExplore is a leading data-driven solution provider to insurance carriers, repairers, dealerships, fleet owners and suppliers. In order to build a diverse customer base, you have to provide an exceptional customer experience. These products help you do that through technology.

Others like Frank Terlep have been working in electronic marketing for years and again offer tons of ways to grow through social media and electronic methods. If you would like to contact Frank, or another representative from AudaExplore, email me, and I will get you contact information for both.

Make no mistake, to expand and diversify, you have to market your shop to every class of customer. That's how di-

versification happens — through marketing. The awareness in each group has to be heightened by what you do as a shop owner and manager to cause it. Hoping for additional customers from the country club doesn't get it done, but marketing to that segment will. If you want to work on garbage trucks, go after a garbage truck account. If

you want to do Rolls Royce, then pursue them as well. Action is what will get it done. Every customer wants the same thing: a quality repair for a fair price. If you prove you can do that for all segments of your potential customer base, you are going to need a bigger shop. Here's hoping you need one soon. 📧



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Kevin M. Mehok is CEO of CrashCo Collision Centers, a division of Auto Care Collision Group, Inc. In his more than 30 years of experience in the collision industry, he has worked with CarCare Collision Centers and Collision Centers of America. He also served in an executive level position with Collision Team of America, Gerber and several other Chicago-area consolidators.

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MINDING YOUR BUSINESS

GET YOUR SHOP OFF THE HAMSTER WHEEL



TAKE ADVANTAGE OF NEW LEAN OPPORTUNITIES TO SEE DIFFERENT RESULTS IN YOUR BUSINESS

BY KEVIN MEHOK | CONTRIBUTING EDITOR

MOST OF US in this industry have been inundated over the years with all kinds of new and better ways to build our shops. Many of these ideas are really great, but we may not be sure how to implement these ideas, and generally they fall by the wayside. The day's activities, and the problems at hand seem to get in the way, and not much changes.

It is time to stop, refocus, and look at some of the ideas that you threw away, that aren't so new, but will bring about some major change in your shop. One of them might be going lean.

All of us know the term "lean," but we may not have a clue where to start. Converting to a lean environment takes a huge commitment, and will cause considerable disruption. If it was easy, it wouldn't be worth doing. But, it isn't as hard as you might think, especially when you see the improvements that will occur along the way.

Lean is really the reduction of waste, which is defined as non-value-added work, within each operational process you perform. This is applicable to administration, repair and work flow, painting, parking and more.

Let's look at some really basic examples. These may or may not apply to your shop, but let's ask these questions:

- Do you have excessive supplies sitting around your shop hidden on shelves or in cabinets?
- Do your techs constantly come to you looking for parts?
- Does your office staff spend any time looking for supplies like paper or pens?
- Have you ever misplaced a customer's keys and spent hours looking for them?
- Do you spend any time looking for your employees throughout the day?
- Have you ever received incorrect or damaged parts after waiting for them for days?
- Do you have techs that come to you when a car is scheduled for delivery with a list of parts they need to complete the job?

My guess is the answer is "Yes" to more than one of these questions. Looking at this situation, do you think you are running with top notch efficiency? Not a chance! Hopefully, I opened your eyes a little and have created an awareness that changes are needed.

I want to explore the areas where your shop can improve, and then provide ideas about how to begin without causing lots of pain. As an owner or manager, you have to be the driving force behind going lean. Starting with small steps in spe-



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cific areas will ease you and your staff into the process.

Admin, office processes

Let's look at your office first. What tasks do not add value? Your customer is only interested in things that add value to their experience. They don't care about the admin things you have to do to get your job done. They want to embrace things that improve the experience for them. Develop a process that streamlines the customer experience when they come into your shop for an estimate. Make sure everyone understands the process and becomes proficient with it.

Arrange your office with specific locations for the things you need daily — paper, pens, etc. Make a key board for customers keys; create a system for storing customer paperwork. Insist on clean and organized work areas from all your employees, and create an environment that fosters organization and cleanliness. De-clutter your waiting rooms and front counters so they are neat and organized. Look at all your front offices with new, open eyes and start your lean experiment there.

Estimating and appraisal

How do you handle your estimates? Do you look at them as opportunities, and approach each one with a certain level of interest? Have they become a source of interruption? This is an area where consistency will have an impact on your bottom line. Everyone in your shop should write estimates the same. Develop and initiate a universal methodology for writing estimates. This will take some time, but the exercise will be worth it. What you are doing is standardizing the estimating process so that it is consistent and repeatable. If you need more information, email me. I will provide you with some methodology to get this accomplished.

Parts and production

Your parts and production departments can quickly benefit from lean principles.

An incorrect part discovered at the time of reassembly can kill a shop's CSI and on-time delivery ratings. It's frustrating to find an incorrect part after you updated a customer with a deliv-

ery expectation. Especially when the part needed is hard to get and critical in the reassembly process. Develop a process for checking parts upon arrival.

Look at what you do today, and try to find solutions to the problems that you encounter daily. Ask for feedback and input from everyone. Part of lean is continuous improvement. By this I mean tweaking the process over and over. Try new things. Once a solution works, implement it as part of the process. If you involve your people in developing a process that works for you, buy in will be high, and the ideas will work well. If you just jam change down your employees throats, you will fail quickly.

Body repair and supplements

When a vehicle rolls into the shop, do you have a process that involves a thorough tear down and supplement standard? When a vehicle is torn down for inspection, where are all the parts stored? Are they labeled so that everyone knows where and what they are for?

My best guess is that every shop believes they do a pretty good job of handling the repair process. I also know that most shops can gain great efficiencies by utilizing lean culture and ideas here. I would bet that your most efficient tech has a tool box that is highly organized. Every tool is easily accessed, and he or she hardly ever spends time looking for a tool. When he or she needs a 10 millimeter socket, its right where it should be. They grab it and go. Implement the same idea with your repair process. Create standards that allow everyone to easily follow any repair plan.

Do your techs fully understand what needs to be done when a vehicle comes into their stall for repair? I know of one shop's tech who, in one day, came up to the office 25 times. If each trip took three minutes, that is well over an hour of wasted time per day. That's just the tech's time. Whoever the tech was asking questions of also spent that same hour wasting time, when one minute of clear explanation or direction could have probably avoided the time loss.

Painting and detail

In my experience, the paint shop is the biggest area of constraint in any collision shop. Usually multiple techs are funneling completed collision work into

a paint shop, and the paint shop has to determine what to do to handle that large workflow with limited personnel. Process implementation is paramount here. Managers must direct the workflow so that the "gravy" jobs don't get done first. I create a numbered paint list that directs the paint shop daily with regard to paint order, so that I control what jobs get painted, in what order. Not only is workflow important here, so is material usage. Waste of materials in all departments is important to control, but especially in paint. One idea is to consolidate priming so that many vehicles are primed at one time, instead of several times throughout the day.

This area is ripe for improvement in every shop, and as I have said many times over, use your jobbers' knowledge to help you here. All paint manufacturers have technical people that will look at all of your processes and help you outline a game plan for improvement. This advice is generally free, and will net you great results. I also highly recommend that you and your staff attend lean training seminars and workshops. The entire shop needs to understand the lean concept, and the benefits its implementation will provide them directly.

What I am saying is that every single phase of your operation can benefit from implementing lean processes.

Opportunities exist in every department, not just in the shop, but in the offices, paint shops, collision shop and detail areas. Every single department has opportunity for improvement. Don't be scared. Get started slowly, and grow as your knowledge grows. Your bank account will thank you. 📧



**KEVIN
M. MEHOK**
CONTRIBUTING
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Kevin M. Mehok is CEO of CrashCo Collision Centers, a division of Auto Care Collision Group, Inc. In his more than 30 years of experience in the collision industry, he has worked with CarCare Collision Centers and Collision Centers of America. He also served in an executive level position with Collision Team of America, Gerber and several other Chicago-area consolidators.

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PROFIT MOTIVE: YOUR COMPASS TO FINANCIAL SUCCESS

Do you have a staffing problem?

Consider carefully; your actions can cost you dearly in terms of time and money

BY TOM MCGEE | CONTRIBUTING EDITOR

As a shop owner or manager, you have probably felt like you needed to hire additional staff to solve a problem or replace someone already working for you because they are not meeting your expectations. Shops face these decisions on a frequent basis.

But before you hire additional staff or begin making a staff change, ask yourself, "Do I really have a staffing problem?"

Whether you are making the choice to replace someone or to increase the size of the staff, there is an associated cost. You have the cost of advertising and the time required to interview and coach a new employee. Making the right staffing decisions can save thousands of dollars.

The business has changed

The needs of the business change frequently, and they need to if you want to remain competitive. But shop owners often tell me they need to get a new shop manager because the current one is not meeting their expectations. I try to find out two things: what are the expectations of the owner, and have those expectations been told to the current manager.

Here's an example. The manager was hired to write estimates and manage shop production. The owner is also expecting the manager to drive business, increase insurance DRPs and grow the fleet business to increase sales. As the business goals changed, so did the job. If the owner hasn't clearly set and communicated the new expectations, then it is very difficult

to hold the manager, or any other employee, accountable for meeting them. You also need to consider what time is available to perform these tasks, and if the current staff member needs additional training and coaching to be successful.

We are hiring

Another common problem today is finding qualified staff to fill open positions. When a shop owner tells me they are going to hire a new employee, I ask them to think about what they are trying to accomplish by adding staff. Have they done a list of essential functions that the person will need to perform? If not, it is likely they will not hire a person with the right set of skills for the position.

For example, if the shop needs a technician, look at what the tech is expected to do. Will the tech be doing structural repairs, bodywork or bumper replacements? This is critical to know, as the skills required are dramatically different for each.

Job analysis

Job analysis is a process to identify and determine the duties and requirements for each position. The analysis must be conducted on the position, not the person. The

purpose of job analysis is to establish and document the position for items such as the job being performed; responsibilities and duties; work environment; tools and equipment used; education, experience, skill, and certification; and compensation, among others.

Job description

Once you complete the job analysis, create the job description. These are used to ensure your applicants and employees understand their roles and what they need to do. Job descriptions also help attract the right candidates, describe the major areas of an employee's job and serve as a basis for outlining performance expectations, training and evaluation.

A job description should be practical, clear and accurate to effectively define your needs. Good job descriptions typically analyze the important facts about a job such as individual tasks involved; the methods used to complete the tasks; the purpose and responsibilities of the job; and qualifications needed for the job.

Jobs are subject to change for personal or business growth or due to the introduction of new technologies. A flexible job description encourages employees to grow within their position.

Job analysis worksheet

It is difficult to attract and retain quality staff today, and the wrong decisions can be very expensive. To help you make the right staffing choices, we have developed a job analysis form. Try it free for a limited time at www.ationlinetraining.com/abrn1411.

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SHOP PROFILE

A snapshot of one of the industry's leading shops

ENNEKING AUTO BODY INC. / BATESVILLE, IND.



Taking the high road

Shops remain focused on being true and fair

BY JAMES E. GUYETTE | CONTRIBUTING EDITOR

Because of its location on the old National Road when cross-country travel was accomplished via horse and wagon, Indiana – and in particular Indianapolis – is known as the “Crossroads of America.”

Enneking Auto Body's two shops are 15 miles apart along Interstate-74 amid a modern-day highway hub in the heartland; Greensburg is 45 minutes from Indianapolis, while Batesville is 45 minutes outside of Cincinnati.

“Both locations are in the center of small-town America,” says Joseph Enneking, who owns the family business with his wife Karen. “We thrive in a small, rural community by focusing on satisfied customers.”

Although just 5 percent of the clientele makes the trek from Indy or the Queen City, 40 percent of the customers fall into the “professional” category because of the company's proximity to busy corporate enterprises and comfortable country homes. The region's accompanying agricultural atmosphere brings full-service variety to a marketing mix that goes beyond typical collision repairs.

Ranging from reapers to Mercedes, “there are times that we find ourselves working on anything from farm tractors to semi-trailers,” he reports, noting that mechanical expertise and the ability to conduct full restorations for vintage vehi-

cles aligns with a highly centered commitment to excellence on all counts.

Most of the surrounding competition consists of “one- or two-man shops that don't have DRPs,” according to Enneking. Direct repair program affiliations amount to about 35 percent of the \$3.1 million in annual sales.

Insurers appreciate the ongoing pursuit of gold-level certifications that include adherence to the latest OEM standards, such as aluminum body work, plus delivering top craftsmanship and pleased policyholders.

“The vehicle owner is who we work for. We do everything to make sure their vehicles are repaired safely, which is number one,” Enneking says. “We maintain good relationships with those companies that keep their customers' needs and safety in front of their profit lines.”

“An initial teardown of each vehicle to ensure all damage is seen and accounted for upfront really helps alleviate supplements down the road. We operate lean through blueprinting to increase efficiency and ensure quality and safety for our customers.”

AT A GLANCE

**Enneking Auto Body Inc.,
Enneking Auto Body of
Greensburg Inc.**

Name of shops

Batesville, Ind.

Headquarters location

Joseph and Karen Enneking

Owners

60

Years in business

22

No. of employees

6.9 days

Average cycle time

\$2,550

Average repair ticket

42

Average vehicles per week

9; 7

No. of DRPs (Greensburg;
Batesville)

CCC ONE

Estimating system used
nodentsnodings.com;

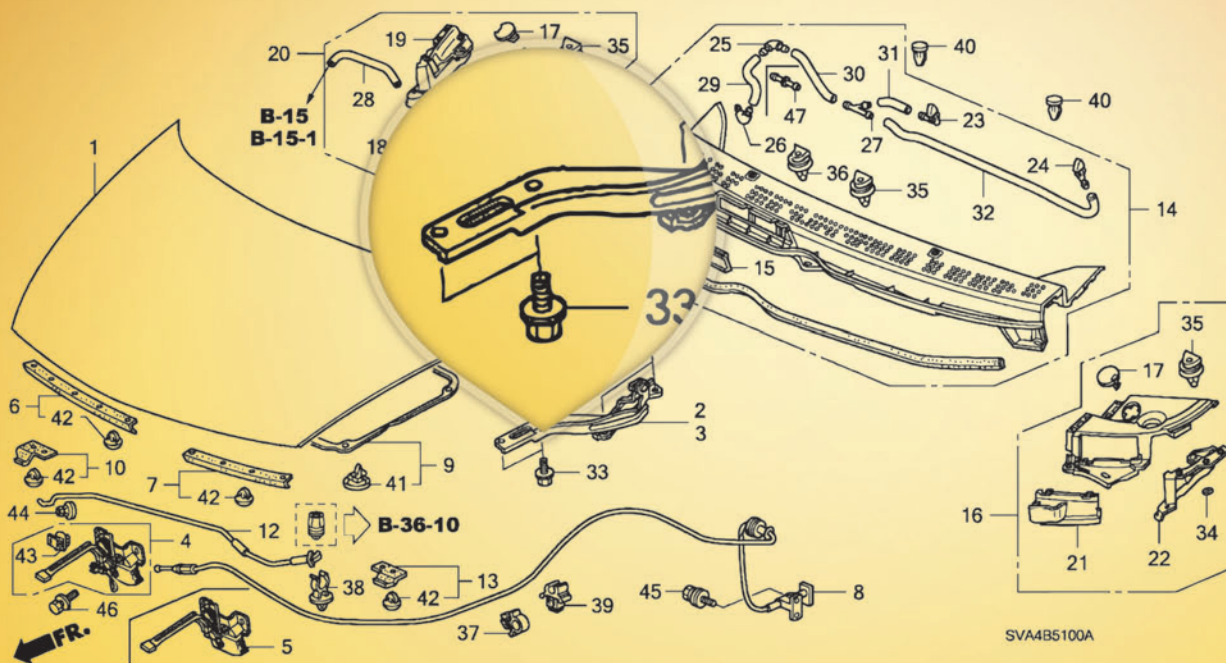
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Websites

Backbone of the business

“All of our insureds in Indiana have the right to pick OEM parts for six years, so we don't have much of a problem with aftermarket parts,” says Enneking. “Using

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OEM parts not only improves cycle time by reducing unnecessary procedures, such as fit tests and adjustments, but it also removes the safety concerns on airbag deployment.”

The shops have also begun focusing on improving communication through email, AutoWatch, Facebook and consistent phone follow-ups. “We are working to establish procedures to better understand the customer’s experience pre-repair and then examining their experiences post-repair to ensure all expectations are met.”

Continuing education incentives is critical to achieving the company’s goals of continuity among the staff and consistent customer service. Instruction, conducted both in-house and at industry seminars, is provided by vendors, OEMs, I-CAR and more – and augmented by 20 Group participation.

Recruitment, retention and results are a localized in-house endeavor, especially when the rural environment of the two shops is compared to the bright lights and temptations of big city life. Prime candi-



dates tend to be young men who enjoy tinkering with farm equipment, cars or motorcycles while expressing an eagerness to settle down close to home as they embark upon a stable, rewarding career.

“We train our own. We go after guys with a mechanical aptitude, but the work ethic is what we’re really after,” Enneking asserts. “A lot of times we recruit through our employees. They already know what body work is all about and they know guys who will make a good fit.”

Along with his wife Karen, two daughters, a son and a nephew are also on duty at the company. “Working with family has been a great experience overall. At the present time we are begin-



ning to work on a succession plan for my retirement.”

He chuckles when questioned about keeping work issues at bay during holiday dinners: “There have been some lively discussions at times.”

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PAINT STORE IN A PARTS STORE



Dad's drive and passion

"I've done this since I was 14 years old and never wanted to do anything else," Enneking recalls, pausing to reveal that, yes, at one time he did aspire to take to the skies as a jet pilot. Keeping his feet on the ground, and realizing that "I don't care for big cities and all the hubbub," he carried on with his father's calling while pass-

ing it forward to yet another generation. "We'd drag the kids along while my brother and I attended the industry classes, so they've been at it all their lives."

Enneking's brother Andy has since steered away from collision repair to become a "gentleman rancher," satisfying a lifelong desire to pursue animal-oriented outdoor activities.

Originally based in Oldenburg, Ind., the company was founded in the 1950s by their late father Stan, who learned about repairing vehicles while reviving battle-battered Jeeps during World War II. "Without growing up witnessing his drive and passion for the industry, I don't know where I would be right now," says Enneking.

"Myself and my six siblings all worked at the shop at one point or another, mostly to wash vehicles or sweep the floors. However, my brother Andy and I took a deeper interest. During high school I participated in technical vocational programs. After graduation I became a full-time technician and painter. At that time you painted the vehicle that you repaired – it wasn't a separate position."

As the years went by, Stan retired and the business evolved into two locations. Upgrades and expansions have been steadily implemented along the way. CAR-STAR founder Lirel Holt was hired in the 1990s to assist in designing the interior layout of a new building in Batesville. The Greensburg operation, acquired from a competitor in 2003, was moved in 2007 to a more suitable structure that had once served as a motorcycle repair shop.

"Both experiences required more time and effort than I could have imagined," Enneking recounts. "In the end, I believe we developed two great facilities that aid in maintaining our good reputation," he observes, citing the value of education and the company's commitment to meeting and exceeding the needs of the customer. "Their word of mouth has always been our primary means of marketing and growth."

He concludes by emphasizing that "our mission at Enneking Auto Body is to deliver high quality, cost-effective repairs while remaining true and fair to our employees, clients, partners and vendors. We let our workmanship speak for itself by always returning customer vehicles back in their pre-accident condition."



JAMES E. GUYETTE
CONTRIBUTING EDITOR

James E. Guyette is a long-time contributing editor to ABRN, Aftermarket Business World and Motor Age magazines.

E-mail Jim at JimGuyette2004@yahoo.com



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MATERIAL

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 BY **TIM SRAMCIK** | CONTRIBUTING EDITOR

Several months ago, *ABRN* spoke with the industry's paint companies and asked for recommendations on future training. Nearly everyone noted that shops must be ready to repair the 2015 Ford F-150, the ultra-popular large truck that was redesigned with aluminum throughout its cab and bed, making it 700 lbs. lighter than the previous model. The aluminum design allows the truck to be larger while offering better mileage, increased load capacities and greater resistance to damage.

It also puts materials squarely in the focus of shops planning their futures.

Materials have always been a significant part of the repair business equation. Most recently, the bulk of that attention has been on high strength steels (HSS). Challenges surrounding HSS repairs usually could be solved with OEM

repair information and existing tools and equipment. This won't be the case with the new F-150.

Aluminum repair training, available from I-CAR, will be necessary and cost \$1,000. Recommended tools — including MIG welders, specialized rivet guns and vacuum systems — run \$30,000 to \$50,000.

If you're considering taking the new F-150 off your repair list, remember this. It's Ford's most popular vehicle, accounting for most of its profits. If it's successful, expect Ford and other manufacturers to begin using aluminum throughout other models. (Ford has invested hundreds of millions of dollars in aluminum research and the refurbishing of its factories to build aluminum parts.)

The new F-150 also should herald the entry of other material options in the auto market over the next five years.





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Mercedes-Benz

Let's take a look at what's driving this trend, along with the materials knowledge and training you'll need.

Weighty matters

Ford's decision to invest in aluminum was driven largely by tougher corporate average fuel economy (CAFE) standards and the need to keep the F-150 popular with consumers worried about high fuel costs. Auto manufacturers have addressed emission and mileage issues with a combination of more efficient engines (including hybrids and alternative fuel versions) and by utilizing lighter materials, especially HSS and plastics.

Notable here is the fact that lighter materials really haven't been used to maximum effect to lower vehicle weights. Instead, they've been utilized

either to compensate for potential added weight (passenger protection systems that require stronger steels) or to offset the addition of heavy components. In fact, the weight of many vehicles actually have been increasing. That trend needs to be reversed now that automakers have set goals of reducing vehicle weights 12-18 percent over the next 10 years to meet CAFE standards

Reducing vehicle weight provides multiple benefits for meeting and exceeding these standards. When a vehicle weighs less, it can use a smaller engine, which further reduces weight and improves efficiency. It also clears the way to using a host of new, alternative power plants.

Automakers, therefore, have spent considerable time and resources in the last several years expanding the use of lightweight materials while considering ways to employ new ones.

Carbon components

BMW, for example, has invested heavily in carbon fiber, a popular — though expensive — choice for years in aftermarket parts and racing cars. Carbon fiber composites provide 10 times the strength of aluminum or stainless steel. Their rigidity is equivalent to stainless steel, and their weight is two thirds that of aluminum.

BMW used carbon fiber to help trim 770 lbs. from its i3 electric car that hit showrooms this summer. The i3 is constructed of two modules: a carbon fiber life module, which contains the passenger compartment, and an aluminum drive module housing the batteries, powertrain and the vehicle's basic structure. The carbon fiber is so rigid the vehicle doesn't need a B-pillar.

The i3 carries a \$40,000 sticker price, putting it beyond the means of many consumers. However, government subsidies could reduce that price considerably.

Other factors might trim the price even more. Carbon fiber manufacturing is still in its infancy. As production grows, costs should drop.

It may be some time before carbon fiber parts are vehicle mainstays, but BMW's investment, and the interest of other luxury manufacturers, indicates that automakers are becoming more willing to adopt this material.



Photo: BMW

The new BMW i3 uses a combination of carbon fiber parts and aluminum to produce a super-light frame that can be powered by an electric engine and relatively small battery pack.

Aluminum answers

Automakers have been adopting aluminum parts for decades, to the point that the average vehicle now features several hundred pounds of them — though a good bit of that lies in the engine.

Aluminum offers a number of advantages. It weights 10 percent to 40 percent less than steel while offering competitive strength and stiffness. The reason it hasn't been used more in vehicles is its price. That began changing when luxury manufacturers started using it in their vehicle frames. Their customers were willing to pay the higher costs for vehicles that offered better performance.

A similar phenomenon is occurring in the mainstream automotive market as increasing numbers of consumers have indicated their willingness to pay more for vehicles if these costs are offset by fuel savings and other benefits, such as greater corrosion resistance. Ford, therefore, has good reason to believe this trend will ring true for the new F-150.

The cost of producing aluminum has significantly dropped in the past decade, making it more competitive with steel. Increasing demand across a host of industries, however, has prevented it from dropping even lower and kept current prices holding firm. Yet, demand is growing for its use in the automotive market. Vehicle makers have created the term Aluminum Intensive Vehicle (AIV) to describe the increasing number of cars containing an aluminum hood, inner



Photo: Ford

Ford was able to slash over 700 lbs. from its best-selling vehicle using aluminum in its cab and bed. Ford promises its military-grade aluminum will resist dents and damage better than steel.



Photo: BMW

Lighter vehicles allow automakers to pair them with smaller, lighter power plants and engines running on alternative fuels. These lighter engines further cut emissions and improve mileage.



~ Jon Hauschild, Owner,
Scottsbluff Body & Paint



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doors, deck lid, outer body panels, radiator, forged wheels, drift shaft, numerous fasteners and most of the inner body structure. These vehicles offer competitive pricing compared to non-AIV models.

An Aluminum Transportation Group study comparing an AIV Toyota Venza to a standard model noted the latter contained 9 percent aluminum and 59 percent steel. The AIV version contained 37 percent aluminum and 30 percent steel, producing a 28 percent weight reduction and improvement in fuel economy from 27 to 31.8 mpg. The AVI version costs \$534 more. Financed with a typical 60-month loan, the additional cost dips below nine dollars a month. If each version is driven 12,000 miles annually, with gas priced at \$3.75/gal., the AVI model saves over \$250 annually — practically covering the added expense of aluminum in two years.

Benefits like those are so attractive to manufacturers and consumers that aluminum body sheet content in vehicles is projected to increase by a factor of 10 between 2012 and 2025. That means the new line of F-150s should have plenty of company with similar vehicles on the road and in shops.

Steel remains strong

Even with Ford deciding to go heavily into aluminum parts for its top selling vehicle (with more on the way), don't expect steel to simply exit the market. New, lighter advanced high strength steels (AHSS) and engineering are making steel more attractive, moving

it into new vehicle areas.

Originally used for side-impact door beams and bumpers, HSS can now be used throughout the body structure. Advanced bar steels can be used for making lighter springs and stamped high-strength steel suspension control arms that can match the weight of an aluminum control arm. AHSS axles and drive shafts provide significant weight reductions.

Steel makers also can now match the weight of an aluminum door. Steel producers say, in time, they should be able to create steels that weigh as little as aluminum at a lower price tag.

For now, automakers should see continued improvements from available steels. Steel made over the past several decades are only now being exploited. This includes dual phase steels, featuring energy absorbing and fatigue strengthening properties, that make them well suited for safety and structural components. Transformation Induced Plasticity (TRIP) steels feature these same properties, along with high formability, and may be used in complex parts.

Automakers are working on new vehicle designs that better incorporate steel to provide maximum structural efficiency. Engineers note that current vehicle structures are based on grades of steel from 10-30 years ago, instead of those available now.

Automakers also have begun working closer with steel, as well as other material producers to better align their mutual interests. This paves the way for many different materials to make their way into vehicle production much faster than before.

Plot your training program

Your business will need to account for these changes and their implications. Your main challenges are determining how and when to access the necessary changes with the tools and equipment for handling this new generation of vehicles and parts. Put together a plan with the following steps.

1. Stay current with industry news.

Read trade magazines, attend industry meetings and work with your vendors who provide training. Paint companies frequently offer a wide range of business services to keep you up to date.


They also can offer recommendations for your operations and work with your shop to institute new and updated repair programs. Keep in mind that for some vehicles you might need OEM training.

You'll also want to remember that manufacturers will continue using a mix of materials in parts and vehicles. Automakers looking to meet efficiency and revenue goals will build vehicles featuring HSS, aluminum, plastics and other materials in a host of combinations and new designs. Shops will need to account for all these variables.

2. Maximize your revenue. The training and tools you'll need won't come cheap. Make sure your business is running at peak efficiency to afford the cost of these updates. Again, work with your vendors to update your efficiency and profits.

3. Create a training plan. Sit down with your managers and staff and plot a training program. Set goals, such as the number of employees who will complete aluminum training by a specific date. Continue training on HSS since these steels are regularly being upgraded and used in new parts.

4. Implement your plan. If you intend to be in business during the next decade, schedule your employees for aluminum training as soon as possible. Your competitors probably are, and insurers likely will mandate training and certification for certain vehicles and repairs.

On that note, remember that you'll be educating and negotiating with insurers on new materials repairs. Appraisers, undoubtedly, will receive training, but you need to be the true expert. That means preparing now. 

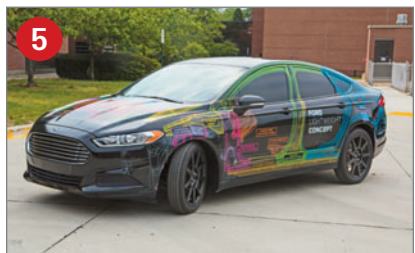



Photo: Ford

Ford's Lightweight Concept vehicle uses advanced materials to help the automaker explore future weight-reduction solutions that improve performance and fuel efficiency.



Tim Sramcik has written for *ABRN*, *Motor Age* and *After-market Business World* for more than a decade. He has produced numerous news, technical and feature articles covering every aspect of the collision repair market. In 2004, he was recognized for his work by the American Society of Business Publication Editors.

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BY ALFRED THOMAS | CONTRIBUTING EDITOR

Although a look at personal protective equipment (PPE) (**FIG 1**) is not the most glamorous subject, it can help increase your productivity and long-term earnings in the industry. How, you may ask? PPE helps keep you healthy, active and on the job so you can consistently earn a living. It may also even protect your loved ones from harm caused by the contaminants that you carry home.

So what are some of the PPE that should be considered? Probably the first ones that come to mind are the most obvious — eye protection and respirators. Most technicians put on glasses when using a grinder (at least most of the time), but what about when mixing paint, or when your partner in the next stall is using a grinder, or welding? How about when you are under a vehicle, or working on air conditioning? We should begin to see that a good argument can be made for eye protection to be worn at all times in the work area. And what about respirators? Even to this day I see technicians in paint booths without a respirator of any kind, or sanding without a particle mask. And the answer is "Yes!" Even though you are spraying "waterborne" paint, a respirator is needed.

Take it from an old technician who started in this profession in 1965: You need to protect yourself at all times. Even that short trip into the booth for only a minute or two with-

out PPE can add up over the years. And it's not only the obvious needs or hazards that we have been talking about. Ask some older techs if they have ringing in their ears (tinnitus); I am sure that most of them will either say yes, or they will admit to some hearing loss. If you only start thinking about protecting yourself years after you have started working, by then the damage may have already started.

For your safety and well being, then, we will run through details of most of the PPEs such as eye protection, respirators, gloves, hearing protection, paint suits, boots and work uniforms. We may omit some such as eye protection when using UV cured paint, or alkaline protective clothing when replacing a cracked lithium ion battery. While we will plan to cover most of the common everyday PPEs that will be encountered in the collision repair industry, bear in mind that each time you learn a new technique or a new product is introduced into the workplace, the proper personal protective equipment for that situation should be used.

Which PPEs to use

The Material Safety Data Sheet (MSDS) must, by law, be provided to the shop every time a hazardous material is delivered to the shop. In this multi-section document, there

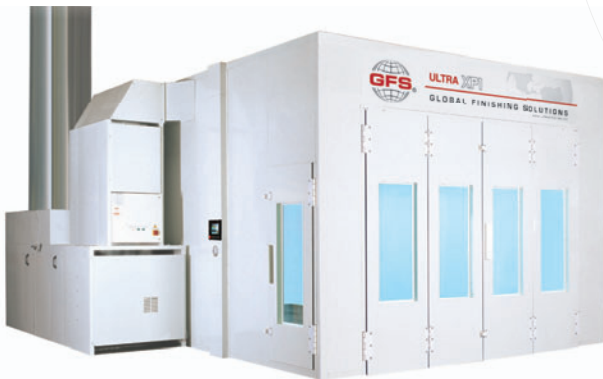


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is a vast array of information about the product in question. But for the purposes of this discussion, Section 8 (Exposure Controls/Personal Protection) of the document should be studied. This section will tell not only of the risks of exposure to the product, but also how to protect oneself from that risk. While the list of equipment needed for protecting yourself will be easy to find, the actual use of that equipment is not listed. Therefore, not only knowing which equipment is needed to protect yourself, but also receiving the proper training for use of that equipment is necessary.

Eye protection

Eye protection comes in many forms, each having a very specific use; but the most common item is safety glasses with side shields. This type of eye protection will shield the worker from flying debris such as dust and smaller objects like grinding particles. To an extent safety glasses will also protect your eyes from liquid, but when a tech encounters a liquid hazard, such as mixing paint, a face shield or goggles should be worn. Safety glasses should also be worn under the face shield to protect the eye itself from being struck by heavy or falling objects.

Welding helmets, with the correct darkening shield, should be worn at all times when welding. Even though you may see people on TV welding with only a helmet and closing their eyes before the arc is struck, the closed eye will not safely protect the eye from a welding strike and "weld-

er's burn" of the eye can occur. Again, safety glasses should be worn under the welder's helmet.

Different equipment is needed for plasma torch/gas welding eye protection. Though the light of a plasma torch and gas welding is less than MIG or TIG welding, there is still a chance of damaging your eyes and so the proper eye protection should be used. The proper shielding shade can be found in the MSDS for the equipment used, or in the equipment's manufacturer recommendation.

Respirators

Respirators also come in many different types for specific jobs. For example, particle respirators (N95) (FIG 2) which, as the name implies, filter out particles in the air from sanding, will not filter out either mist or acids. For protection from these, an air purifier respirator (FIG 3) should be used. These purification type respirators come in full face coverage or partial face coverage. Still, they have their limitations, the greatest of which being that the active purifying agent in them can become inactive, putting the operator at risk.

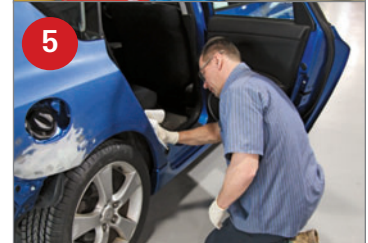
The next class of respirators is the air supply (FIG 4) type, which supplies fresh air to the operator at all times. The clean air is piped into the mask at a positive pressure, with a full face hood which keeps any contaminants from coming into the mask. It is often said that the safest paint respirator is the full face fresh air supply respirator, because no contaminants reach the painter.

Though the respirator seems like a very simple device to use, it does require both testing and training on its proper use. The proper use of a respirator can be found on the 3M website, along with the proper way to put the mask on and how to perform a seal test once it is on. To know which size mask should be used and to determine that it is working properly, a respirator test should be performed each year.

Air purification masks do not have an off switch, so if left in the open air, they will continue to operate, thus reducing



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their working life. They should be stored in an airtight container when not in use.

Gloves

Though we most often think of gloves as those used with painting, various protective gloves guard technicians against a great number of problems. Work gloves protect us from cuts and scrapes, and now come with anti-vibration devices in the material. A technician who is approaching years of hard work with a DA can be saved from joint and ligament injuries with the use of good work gloves. Welding gloves protect from burns, and with the long cuff (gauntlet) they also protect us from sparks getting onto the skin. Heavy chemical resistant gloves protect us from paint chemicals when cleaning equipment, and nitrile gloves help when applying wax and grease removers on vehicles (**FIG 5**).

Hearing protection

This is one of the easiest PPE items to underrate, because hearing damage is cumulative. That is, even though the noise is not loud all at one time (such as from gunfire), even lower but persistent noise (such as the whirring of an air compressor) can, over time, do great damage to your hearing. The hearing loss also has such a slow onset that the damage is not noted until it is too late. Protective devices range from simple ear plugs, which are placed in the ear canal to block the noise, to ear muffs. And the two can

be used together if needed.

So when should hearing protection be used? When you are standing at a normal distance from a co-worker and you must raise your voice for them to hear you, then the noise level is hazardous, and hearing protection should be used.

Paint suit


Paint suits should be worn for the protection of both the painter and those he or she lives with. The painter's suit (**FIG 6**) will protect the painter from paint chemicals when used, but will protect others as well after the painter finishes work. Suppose after painting all day a painter goes home and hugs his family members. If the tech worked without a protective paint suit, all the chemical contaminant is transferred to them. But the painter who uses and then removes a paint suit doesn't give the family "chemical hugs" when he comes home. Paint suits also protect the vehicle from dust or other problems that may be on the painter's clothing when he or she enters the paint booth.



Other PPEs such as steel-toed boots (**FIG 7**), welding shin and ankle guards (which guard against heavy steel hitting skin and sparking), fire-retardant work uniforms and even pants without cuffs all help protect against sparks and spills.

Protective clothing

Personal protective equipment may be unglamorous to discuss and the training may seem boring. Some equipment can seem cumbersome and difficult to use from time to time, and it might seem convenient to believe the threat to your body and health is not really so great. In fact, some of you

may get away with no harm when PPEs are not used. But not using the proper PPE just once might also cause serious damage, which could have been prevented, and sadly, could lead to a life of disability and discomfort. 



ALFRED THOMAS
CONTRIBUTING EDITOR

Alfred Thomas is associate professor and department head of Collision Repair at Pennsylvania College of Technology. He spent 15 years in the collision industry as a technician and shop manager.

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ADVANCED JOINING METHODS FOR TODAY'S VEHICLE

WITH MAJOR CHANGES IN VEHICLE CONSTRUCTION,
THE COLLISION INDUSTRY NEEDS TO LEARN A NEW WAY OF THINKING

BY **SCOTT VANHULLE** | CONTRIBUTING EDITOR

When people say, "They don't build cars like they used to," they have no idea how right they are. Cars today are light-years ahead of where they were just a few years ago. It is no longer vehicles of the future we are discussing, but current vehicles on the road today, and some are being repaired like nothing has changed. With major changes in vehicle construction, the industry will need to learn some advanced attachment methods and a new way of thinking. Let's take a look at some advanced attachment methods necessary for repair on vehicles that are on the road today.

MIG brazing

MIG brazing is used for many reasons, such as to make continuous weld joints on panels where warping or overheating heat-sensitive materials are a concern. MIG brazing is also used to make slot welds when attaching heat-

sensitive materials, and where recommended in OEM repair information. Most of the MIG brazed joints are used to attach a lower strength steel part to a higher strength steel part that is heat sensitive.

Another benefit of MIG brazing is that it is softer than steel, allowing it to be more easily shaped and finished (**FIG 1**).

The MIG brazing wire tensile strength is approximately 275–350 MPa, but the MIG brazed joint may be stronger than that if done correctly, due to the thickness of the bead on the backside.

The filler metal, which is usually silicon bronze, melts at a lower temperature than the steel base metal. (As a side note, MIG brazing cannot be used on aluminum panels because silicon bronze melts at a higher temperature than aluminum.) The molten filler metal is drawn into the joint by capillary action. In order to have a successful repair when





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Our industry has taken another leap in the last 10 years, from lean concepts to now working with different alloy metals and education being the trends of today. Collision Specialists, Inc., (CSI) in Austin Minnesota has more than kept up to these trends and we took them to another level. CSI has been ICAR gold for 10 years and has kept up with new equipment like the Infinity 3D laser measuring system designed and produced in Edina, MN.

In a world of accuracy and speed, Infinity stands above the rest as not only a measuring system but a tool that can be used in what we call the blueprinting portion of the shop. There is no question that the Infinity has ability's that others lack, tested by myself side by side with other measuring tools for over two years, it is probably the most important tool in our facility. When we receive a vehicle, the first thing we do is a complete teardown and measure the vehicles that we think could have damage to the structure or the suspension of the vehicle, which we identify within a 15-30 minute setup of the Infinity system. We may not get paid for all teardowns but we will not know until we measure and we must do this to make sure the vehicle will be going back to the customer in correct and safe order. The Infinity plays an important role in finding collision damage and

helps us with our repair plan. We have spent too many years finding damage halfway or the end of the repair processes, which delay delivery times.

The Infinity has lighted targets (12) which show red yellow and green lights that tell you if the designated location on the vehicle is in or out of specifications by as low as 1 millimeter. These lighted targets are especially liked by adjusters and technicians as it is easy to understand how much damage a vehicle has, and when getting pulled on the frame rack, the technician does not have to get up and go to the monitor as he can watch the targets change color as he moves the vehicle into specs. The computer also produces colored printouts we can print or email to insurance companies. The Infinity is easy to set up as any length stem may be used to get the targets in range of the laser, it can tell what length stem is being used and calculates the height distance. Another feature of Infinity is that the vehicle does not have to be leveled as it calculates these tilted measurements also. The laser may be placed anywhere around the vehicle which helps it to make contact with the targets. I bought a two post lift for blueprinting and teardown and the same vehicle may be set up on the frame rack as the Infinity is a mobile, wireless, workstation.

We have strived to make our collision facility repair processes fast and accurate and I can definitely say we could not do that without this Infinity system, the payback is not only



monetary but the importance of getting an exceptional repair is the most important thing we need to concentrate on as a collision repair facility. At CSI we strive to make our clients number one with great cycle time and surpassed quality performance. The Infinity measuring system is fast and accurate. We depend on it every day. Shops need to measure in the beginning of the repair processes to better understand what they are about to repair, and Infinity does that.

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MIG brazing, capillary action is required for a strong joint. Capillary action is the process in which the molten filler metal wicks or spreads out along the backside of the repair joint. The filler metal then bonds to the base metal.

When you make MIG braze joints, try using a manual stitch to control the heat affect zone (HAZ). This technique works well when using a GMA (MIG) welder that has silicon bronze wire instead of steel wire. There are some machines that have a preprogrammed setting for MIG brazing. These machines also have adjustments for electrode size, material thickness and electrode alloy. The goal on an open butt joint is to create a weld bead on the backside that is almost indistinguishable from the front side bead (**FIG 2**).

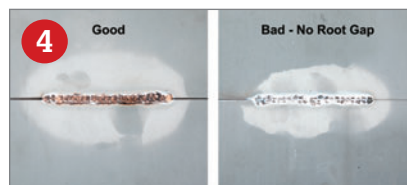
The natural tendency when someone starts to MIG braze is to turn up the welder in order to get the bead to look the same as when GMA (MIG) welding. This is both unnecessary and detrimental to the repair joint. It will dramatically increase the HAZ, and



still may not provide the proper amount of capillary action.

Another critical part of MIG brazing is to keep the proper root gap to ensure that the brazed joint is strong. If the root gap is too small, there will not be enough capillary action taking place. When the front side is ground down, the weld bead on the backside is the only thing that is providing strength to the repair joint.

Just like with GMA (MIG) welds, you must visually inspect and destructively test practice welds. When inspecting practice welds, look for tearout around the brazed joint the same way as when testing GMA (MIG) welds.



Another destructive test that should be done is the grind destructive test. To do the test, make a weld and grind the front side level with the surface. Then, destructively test the weld. This test will verify that the joint has sufficient capillary action.

Aluminum welding

Next let's take a look at aluminum GMA

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(MIG) welding. For some of the luxury vehicle repair facilities, welding aluminum is nothing new, but for many it is virtually an unknown. First thing that is needed is the right equipment. Most of the vehicle makers require a welder that is capable of welding in the pulse mode (**FIG 3**). (Check with each vehicle maker requirements for full details.)

The next thing that will be needed is training and practice. Aluminum

welding is far less forgiving than traditional steel welding. When aluminum welding, surface preparation is absolutely critical to a successful weld. Aluminum, once exposed to air, almost instantly forms an aluminum oxide layer. This non-conductive aluminum oxide layer is extremely hard, has a higher melting temperature than aluminum, and will cause extremely bad welds due to porosity (**FIG 4**).

If there are any deficiencies in weld-

ing technique, aluminum welding will show it in the form of a bad weld. This is where training and practice are going to be key. With steel GMA (MIG) welding, you can push or pull the weld puddle, and have some success with either method. But with aluminum you have to push the weld puddle. This will preheat the panel ahead of the weld, which will keep a stable arc and allow the shielding gas to protect the welding zone from outside contaminants.



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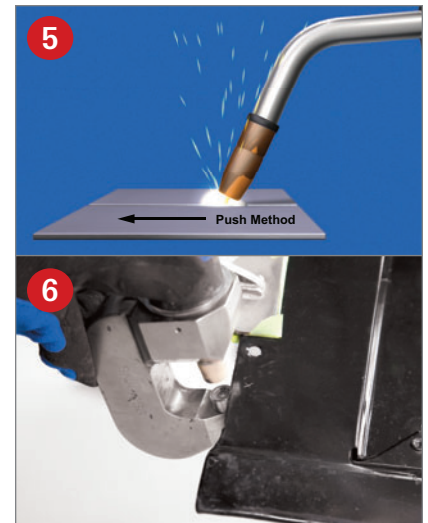
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Rivet bonding

The final attachment method we will look at is rivet bonding, with the main focus being self-piercing rivet (SPR) bonding. This again is not new to those that repair steel and aluminum luxury vehicles. But for the rest of the industry, it is a new concept. The good news is with some new pieces of equipment, and some training, you will have what you need. With rivet bonding, there are some similarities to squeeze-type resistance spot weld (STRSW) bonding that will be familiar. Continue reading at ABRN.com/ICARjoining. 



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Electronic ride control

Electronics and high-speed actuators allow suspensions to adjust to any condition the driver encounters. Here's how they work – and how to fix them!

BY **DAVE HOBBS** | CONTRIBUTING EDITOR

A DRIVER just wants a smooth ride, and you see wires to the shocks and struts and wonder if the problem is electrical or mechanical. You might even wonder how it even works for that matter. Then there's the service manual acronym alphabet soup. There is CVRSS (GM's Continuously Variable Road Sensing Suspension), KDSS (Toyota/Lexus Kinetic Dynamic Suspension System), BMW EDC (Electronic Damper Control), VW DCC (Dynamic Chassis Control) and on and on. How do they work? Are there really that many systems to master? What goes wrong when they fail?

Aside from air ride systems and electronically controlled sway bar equipped vehicles, if we keep our discussion to only electronically controlled shocks and struts, the systems really fall into three basic categories:

1. Manually Selectable Suspension
2. Semi Adaptive Suspension
3. Fully Adaptive Suspension

Suspension review

Before getting too deep, let's review suspensions in general. Suspension system springs must compress and rebound with bumps and holes in the road surface. The softness or firmness of a spring is spring rate. Shock absorbers return the suspension to its natural position quickly and smoothly. Not only do shock absorbers control the compression of the spring, but the rebound as well.

Shock absorbers dampen the movement of springs by using fluid or gas forced through holes in the shock absorb-



Electronically controlled versions of suspension dampers come in many forms, including air leveling shocks and struts.

er's piston. The size of the holes determines the damping effect of the shock. As the shock absorber compresses, a piston inside moves through oil or hydraulic fluid. Because energy never goes away, it only changes states, the mechanical energy of the spring oscillations is turned into heat energy to give you that 1 ½ compression/rebound cycle you're familiar with when you move each corner of the vehicle up and down and then step back to watch the shock's dampening performance.

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On the subject of testing shocks/dampers on the vehicle, there is now an app for that. Google "I-Suspend," and for 99 cents you can download an app that has you lay the phone on the passenger floorboard, drive the vehicle and then accelerate and brake as instructed. The app records the spring oscillations via the GPS/shock sensor internal to the phone. The data is then recorded to help you determine if your customer's ride needs new dampers.

Springs and shocks are matched to vehicle weight. Sometimes they are chosen to correspond with the weight of optional equipment added to individual vehicles as they are built. This is referred to as a tuned suspension. Because the lines of differentiation have blurred in the last few years between shocks and struts, we'll just refer to their generic term of damper.

Some of today's suspension systems include electronically controlled

dampers that can produce a soft, medium or firm ride. The ride and handling of the car can be changed for different road conditions or to suit individual driver preferences.

Manually selectable suspension

A set of dampers with electronic solenoids are activated by a module that responds to a manual switch. On performance cars, this switch may read "Sport," "Sport +," "Normal" or "Comfort," as on BMW's EDC. On GM trucks, this switch might be titled "Ride Control/Firm," which gives a stiffer ride to reduce the bouncing movement that often occurs as the bump-induced changes in pitch from the trailer is coupled to the rear suspension of the tow vehicle. This is especially prevalent when towing without a weight distributing hitch. Don't confuse this switch with one marked "Tow/Haul," which is for modifying the transmission shift character-

istic to complement the greater load on the tow vehicle.

Semi-adaptive suspension

The major components of an electronically controlled semi-adaptive suspension system include:



Regardless of the nature of electronic control or air leveling, most dampers today have high pressure nitrogen gas to prevent the oil from foaming during extreme use. Heed the warning label.



Electronically controlled shocks and struts will have the usual components such as a piston, valving, oil and nitrogen gas, along with a solenoid connection for changing the damping rate on the fly.

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 - Electronic control module

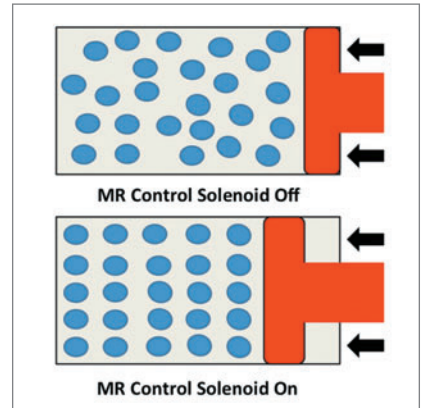
Keep in mind that varying the damping rate of a vehicle can reduce not only the too harsh or too soft complaint on varying road surfaces, but also can address the excessive amount of lift on the front end of the vehicle when accelerating, front end dive when braking and side-to-side roll when cornering.

Systems as early as the 1990s included inputs from the PCM to tip off the electronic suspension control module was going to need to apply a greater duty cycle to the dampers in order to reduce lift from acceleration. Your customer's foot on the accelerator (cable operated or throttle by wire) results in a TPS rate of change long before the engine

speeds up and applies torque to the wheels via the transmission.

Going to the faster CAN data buses a few years ago helped to accelerate the sharing of information between systems all the more. The same is true with applying the brake pedal, especially if the vehicle has an advanced braking system that looks at the rate of brake pedal apply as opposed to a simple discreet brake switch input. This input to the suspension module helps it to prevent dive from braking.

For stability control and/or vehicles equipped with variable effort steering, the steering angle sensor is also given double duty as an input to the suspension module. As the driver gives a more sudden input to the steering wheel, the vehicle will tend to roll as it begins to turn. This can be compensated for with variable damping. Lateral and yaw sensors almost round out the inputs to the suspension module on vehicles equipped with stability control systems. I say almost round out because



MagneRide dampers use a solenoid to control a magnetic field to change the alignment of iron particles suspended in oil. This causes the damper to vary progressively as the field is changed.

the most important sensors inputting to the suspension module would be the body position sensors.

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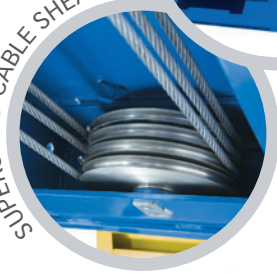
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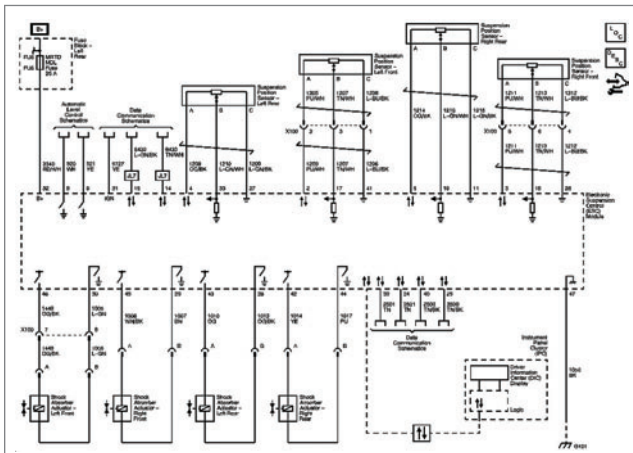
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This 2011 Cadillac STS Electronic Ride Control schematic shows the 4 damper solenoid (outputs) and 4 body position sensors (inputs) to the module. All other inputs are sent via the CAN data bus.

Road texture detection

Any electronically controlled suspension system must be able to detect the road surface in order to determine if the damper calibration needs to change in order to maintain a smooth and controlled ride. This is accomplished through one of two methods: Direct and Non-Direct Sensing.

Some TPMS systems, as well as some ride control systems, rely on the ABS wheel speed sensor to determine tire circumference via wheel speed variations. For example, when three out of four wheel speed sensors are reading 30 mph and the fourth wheel speed sensor is reading 30.5 mph, the natural assumption is that the fourth tire is either the wrong size (mismatched tires) or low on tire pressure. A tire that is low on air will lower in circumference, therefore spinning faster than the others.

If this goes on for a sustained period of time, a passive TPMS system can light a low pressure tire telltale on the IPC. This was a fairly common method of low tire pressure detection until the TPMS mandate of 2007, which required pressure sensors mounted in each wheel. If that fourth wheel speed sensor, however, had trends of slight sudden acceleration and deceleration, that would indicate the tire dropping into a hole (expanding/changing speed) followed by the return of all the weight onto that tire as it hit the bottom of a hole (compressing/changing speed), the ABS module detect a rough road.

There is a DPID on most scan tools for this bit of data. It not only is an indication of how rough your ride will be, but also is data for the PCM/ECM to determine the need for modifying it's algorithm for misfire detection. Unless the vehicle has an automatic transmission with an unlocked torque converter clutch, there is a physical connection between the drive wheels and the crankshaft. This means Wheel Speed Sensor (WSS) variations equal crankshaft sensor variations on the drive wheels, which can result in false misfire DTCs if the rough road is not accounted for.

WSS variations that point to rough road surfaces are also

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now calculated by more sophisticated software in the ABS module to prevent activation on rough roads. Active (Hall Style) WSS in recent years have helped this technology tremendously. This rough road virtual sensor in the form of WSS variations also can be used in the non-direct versions of electronic ride control systems. GM's Body Damping Control (BDC) used in mid-sized vehicles a few years ago was one such non-direct sensing electronic ride control system. If you drove on rough roads, the ABS module detected irregular WSS variations and passed that data on to the suspension electronic control module, which then electronically changed the damper stiffness at each wheel to compensate for the rougher road surface. This compression/expansion of the tire on a rough road and the related exchange of information takes time — about 30 mS to be precise.

For this reason, most manufacturers have opted to spend more money and

drop a suspension to frame sensor at each of the vehicle's four corners. These sensors, sometimes called Body Position Sensors, typically utilize a rod on a pivot between the sensor arm and a suspension control arm or other moving component of the suspension. As the vehicle runs over smooth surfaces or bumpy surfaces, the signature analog signal from each sensor is monitored by the electronic ride control module.

MagneRide

MagneRide has been around since the late 1990s. Used in non-automotive vibration reducing applications such as washing machines, this innovative liquid is a Magneto-rheological fluid containing oil and somewhere between 20 and 40 percent tiny iron particles. These iron particles are between three to 10 microns, smaller than the thickness of a human hair. When the fluid is not exposed to a magnetic field, the particles are in disarray. Used in a suspension

damper, it provides a good resistance to coil oscillations for rough road conditions. Exposing the fluid chamber to a magnetic field (via an electrically charged coil) causes the iron particles to line up like soldiers in formation changing the shear stress of the liquid.

Simply put, this alignment reduces the resistance of the fluid as it is pushed by the piston in the damper's cylinder. Creating a variable duty cycle gives you a range of damper stiffness with less than 10 mS for the transitions. Because there is no movement of a valve into the solenoid, as is the case with non-MR electronically controlled dampers, this makes for a very quiet and controlled ride. GM was the first to use the technology developed in house by their chas-



One of the most common failures in electronic ride control is the body/suspension sensor. This Cadillac Escalade uses a snap-on sensor link that can be dislodged by large ice chunks when driving in winter.



When diagnosing the Body Position Sensors, remove the linkage at one end and sweep with your voltmeter (key on) or scope just like you would a TPS looking for the classic potentiometer drop out. Min/Max should be used when a voltmeter is utilized to catch those intermittents.

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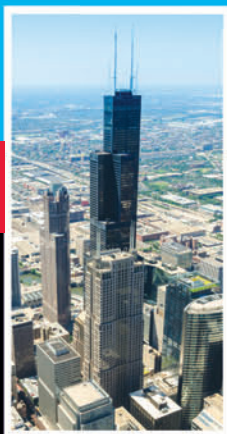


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sis division that later became part of Delphi corporation. The first application was seen on the 1997 Cadillac's as standard equipment. MR ride control systems are still in use by some new GM applications as well as other OEMs. Porsche and others use the technology in their engine mounts as well.

Fully active suspension

Care must be taken to fully understand the difference with these systems. Any system that is not fully active reacts to road forces by responding with resistance. Fully active suspension systems have been attempted in production vehicles for many years by numerous manufacturers. The volume has been historically low and the lifetime of the systems short due to system costs and problems.

Compared to conventional electronically controlled manual or semi-active systems, fully active suspension has a much greater degree of complexity. Take Mercedes ABC – Active Body Control — system as an example. In addition to body position movement inputs from the stability control system yaw/lateral sensors and lift/dive inputs from the PCM/ABS module, the Mercedes ABC incorporates a complex active cylinder inside the strut assembly. A sensor in each cylinder monitors its exact position. A high pressure hydraulic pump allows for proactive (rather than reactive) fluid pressure/discharge to take place to counter the forces on the spring/damper from the road. The ride is more luxurious and sporty at the same time. With a high pressure system and not one but two electronic modules working the system, complexity extends to the service bay in the highest degree.

Service issues

A damper is a damper, whether in the form of a shock or strut and whether coupled with the spring or outside the spring. Therefore the same woes of age and abuse apply. Visual inspection still is in order after a road test/corner bounce test. If there are any signs of fluid leaks around the damper, physical damage to the damper body, worn or broken mounts/bushings, cupped tire wear or wiring harness/connector damage you are ready to sell some dampers.

On the road, test for any unusual shaking, poor steering response, stiffness or noises when steering, excess dive from braking, swaying or leaning into curves and of course

Calibration History for: Operating system			
Part Number	CVN	Bulletin #	Description
20910876	0000A3F9	-	New operating system to minimize noise.
25889545	00001007	-	New operating system to address power-hop at launch.
25893264	00005F81	-	Operating system
Calibration History for: Real Time Damping			
Part Number	CVN	Bulletin #	Description
20910877	000001D8	-	New calibration to minimize noise.
20907424	38	-	New calibration to minimize the occurrence of a high pitched noise from the ESCM system.
25889546	00001760	-	New calibration to address power-hop at launch.
20787076	2936	-	Real Time Damping

Diagnosing an electronic ride control suspension system includes a thorough TSB check AND check of module calibration updates. It is not all that uncommon, especially with GM as pictured above, for there to be no TSBs to accompany a calibration update that addresses a service problem.

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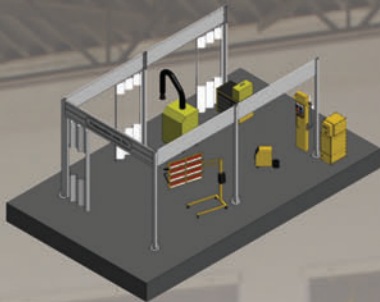
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the classic overly bouncing nature resembling the clown car in the circus. Electronically controlled dampers might exhibit excessive noise while adjusting damping rates on the fly. This often is the sign of the electronic damper needing replaced.

Damper solenoids can go open or short out like any other solenoid, so an ohms check and/or current draw check would be appropriate, along with a voltage drop test of the harness. However, you should (as always) first search for TSBs related to your suspension symptom. Considering the price of an electronic damper compared to a manual one, it would be well worth your effort. There might even be a software update for the suspension control module.

If the vehicle is a GM product, always go the extra step (with any module) to Google "GM CAL ID" and enter the VIN number into the appropriate field in that website's first page. As your progress through the pages of this website (no subscription required), you will find an electronic suspension module if the vehicle is equipped with such a system. As you select that module from the list of programmable modules, you'll see if there is a calibration update. The reason for the update almost always is listed. If the listed reason matches your vehicle's ride symptoms, you then either program that module with a factory scan tool or universal J2534 or sublet that job out to someone who is already into the module programming game.

Recently I had a dealer friend with a customer complaint of a high pitch noise while driving on rough roads. The tech also noticed the lift from acceleration seemed a bit much for this car. (2011 Cadillac STS) The search for TSBs didn't turn up anything exciting so he entered the customer's VIN into the GM CAL ID website and discovered a calibration update to fix a high pitched noise from the electronic ride control system and "power hop at launch." Needless to say, the tech fixed the car with a quick reflash and not a new set of struts!


Body positioning sensors

These are the weak links to these systems, as most readers already know.

They are basically potentiometers (like TPS sensors) in a harsh environment with fragile linkages and mounts. If there is any single most likely cause of a DTC or other ride control complaint on one of these systems, it would be these sensors. Also, in the harsh environment of the under carriage are the damper connectors, which can become disconnected, damaged or experience corrosion.

Communications/other systems

Outside of the dampers having problems, broken body position sensors/hardware, the occasional module hardware/software issues and the usual "Read the DTC, follow the chart" always look at issues that pertain to the other systems that share info with the suspension control module. Examples being the PCM, ABS, Variable Effort Steering, etc. Not only would the sensors themselves be possible suspects in the ride control diagnostic equation, but the primary modules they would report into would as well. This means taking a serious look at all other non-electronic suspension system DTCs including those U-Codes for communications issues.

Today's ride control system is heavily reliant on information from other systems. That means before you even set the rack and start zapping that impact wrench on the shock mounts on a vehicle equipped with electronic ride control, connect an OE level or factory scan tool to the DLC and give the total vehicle a thorough DTC check. A little high tech checkup may go a long way toward keeping your suspension diagnostics riding along smoothly! 



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CONTRIBUTING
EDITOR

Dave Hobbs is a field trainer and training product developer for Delphi Product & Service Solutions. He holds ASE CMAT/L1 and EPA 609 certifications and is an experienced hybrid instructor. Dave has been featured as an instructor in more than 15 automotive training videos.

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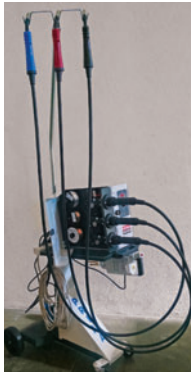
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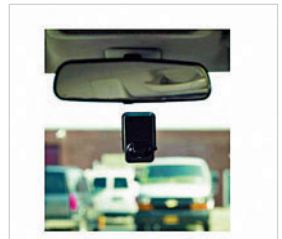
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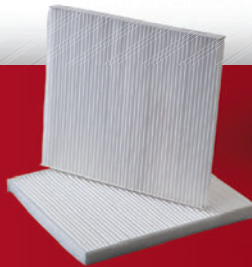
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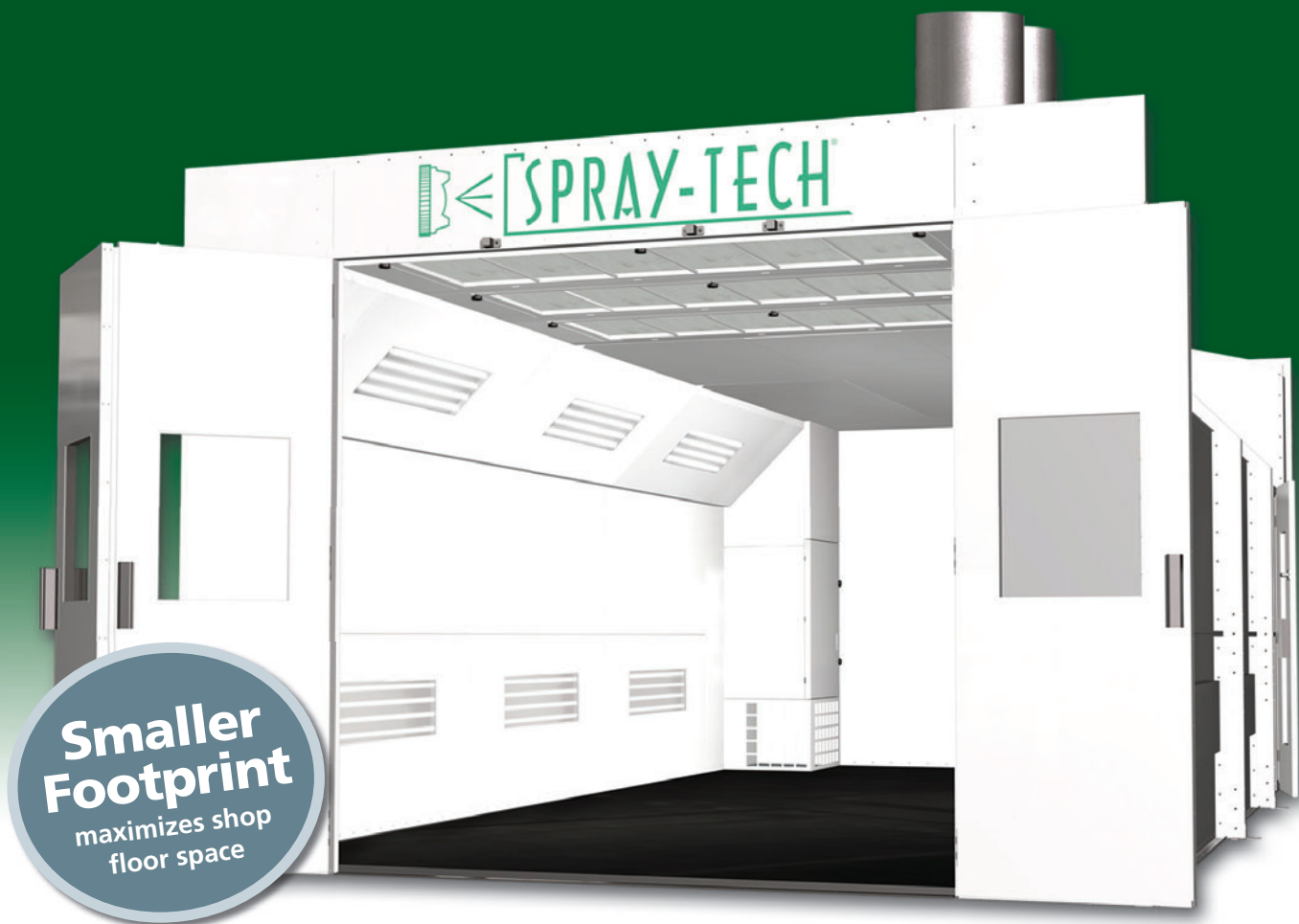
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THE LAST DETAIL 

Often at my estimating seminars, I'll have someone complain to me, "Mike, all the insurance companies will pay me for set up and measure is 1.5 or 2 hours."

My first response is generally to ask what they mean by "that's all they will pay?" People only do to you what you tolerate. If you tolerate getting paid 1.5 to 2 hours for set up and measure, that's all you're going to get paid. It's only when you quit tolerating it that you'll get paid more.

But to be able to negotiate that successfully, you first need to know where the 1.5 to 2 hours comes from. It absolutely does NOT come from the estimating system providers. You can visit the Database Enhancement Gateway (DEG) (www.DEGweb.org) for documentation that the Big Three estimating database providers do not have any pre-determined times for set up and measure.

Mitchell International, for example, in response to DEG Inquiry #995, said, "Mitchell does not develop labor allowances for frame set up or frame measuring, nor do we define the operations that may be necessary to achieve frame set up or measuring."

Motor Information Systems (which provides the estimating database used by CCC Information Services) responded similarly to DEG Inquiry #6,608, saying, "There is no industry standard estimated work time to be used as 'set up' for frame straightening equipment..."

Here's why they haven't established a single set up and measure labor time and why a single uniform time for all shops and all vehicles makes no sense. First, the process that is required varies by vehicle. The only thing that every vehicle has in common is starting it up and driving it into the shop. After that, it all varies by vehicle.

With one type of vehicle, for example, you may need to only remove all the undercoating and seam sealer from the pinchwelds in order to mount the clamps. On another vehicle, you may first have to remove rocker covers before you can remove the undercoating and seam sealer. On another vehicle, you may also have to remove a floor undershield or mechanical lines (such as brake lines or air conditioning lines) that are too close to the pinchwelds. On some vehicles, you may need to R&I wheels. And what you have to do to restore the pinchwelds afterward can vary.

“People only do to you what you tolerate. It makes no sense to have the same labor time for the set up and measure of every vehicle.”

NO STANDARD SET UP AND MEASURE TIME


A single labor time for every vehicle in every shop makes no sense, given the variables

In short, every vehicle is different. Not every car has the same labor time for putting on a door or a fender or to paint a bumper; it makes no sense to have the same labor time for set up and measure of every vehicle.

Set up and measure time also varies by how you are measuring the vehicle. You might be using mechanical measuring with tram gauges or a tape measure. You may have computerized measuring. Or you may be using jigs on a bench system. At least one automaker requires that the vehicle be held at six different mounting points rather than the usual four. The time required for all these different methods also varies.

Lastly, the time to set up and measure can vary based on the damage to the vehicle. The damage may increase the number of control points that have been misaligned, increasing the amount of measuring you need to do. You may need to set up and measure the vehicle multiple times: during blueprinting to fully diagnose the damage, during repair to monitor measurements, and then a final measurement at the end to document that the vehicle is within specifications.

How can a single set up and measure labor allowance take all these variables into account? The answer is that it can't. It's important to understand that this 1.5 to 2 hours has been pushed on us by insurers, and we just keep drinking the Kool-Aid.

People only do to you what you tolerate. I suggest you quit tolerating it. There's so much involved in properly repairing today's vehicles that a flat set up and measure time just doesn't cut it anymore. Get educated about what's required to put every vehicle back to pre-accident condition, and write your repair plan accordingly. 

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