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AUTOPRO  
WORKSHOP

VOLUME 54 | NUMBER 10  
OCTOBER 2015

TECHNICAL

## WELDING PROCESSES, PROTOCOLS AND CERTIFICATION

A LOOK AT MAG, STRSW, WELD BONDING, MIG BRAZING, MIG ALUMINUM AND MORE FOR STEEL AND ALUMINUM

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Repair plastic without using nitrogen

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### FOUR ALTERNATIVES TO HIRING A FULL-TIME CFO

TODAY'S COMPLEX MARKET REQUIRES THIS POSITION TO HELP DRIVE BUSINESS GROWTH



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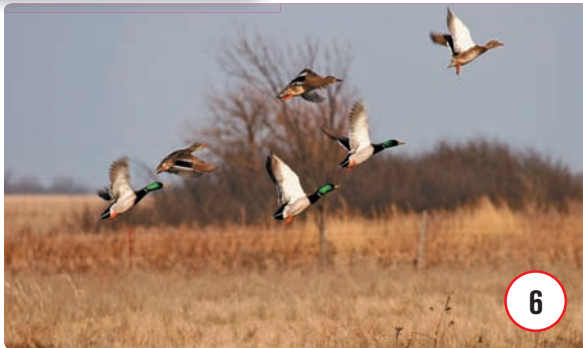
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Axalta is working to protect and conserve natural resources through a five-year, \$10 million wetlands conservation program with Ducks Unlimited, a protector of waterfowl habitats.

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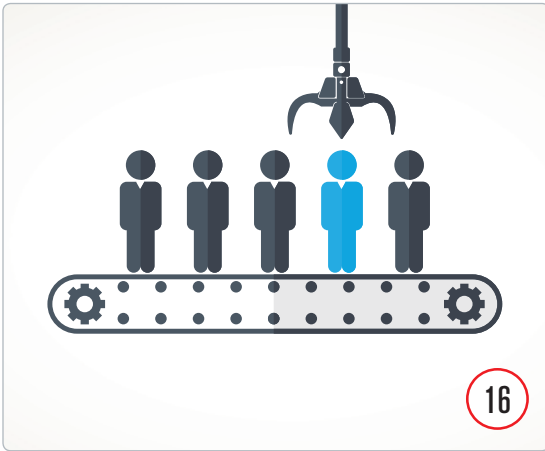
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### CHOOSING THE RIGHT TEAM

BY DAVID ROGERS | CONTRIBUTING EDITOR

Shop owners and managers are responsible for driving the success of their team and of the shop. This starts with choosing the right people and creating an environment of respect and authority.

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#### REAP THE rewards of shop ownership

Many shop owners got into business hoping to reap the rewards of ownership—making money, taking vacation and more time off and less day-to-day struggles. But these expectations may not have panned out. Take back control of your shop, eliminate the chaos and boost your profits — all while spending less time at the shop.

[URL [ABRN.COM/REAPREWARDS](http://ABRN.COM/REAPREWARDS)]

### BLOG SPOTLIGHT

**THE PROPERTY** Casualty Insurers Association of America (PCI) took part in a panel debate about the ramifications of connected car technology at the Insurance Telematics USA 2015 Conference.

[URL [ABRN.COM/PCI](http://ABRN.COM/PCI)]

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- Indoor Booth #22391



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abrn  
TRENDING



ONLINE COVERAGE

## THERE'S MORE ONLINE:

### I-CAR ADDS NOTTE TO LEADERSHIP TEAM

Nick Notte has joined I-CAR as Director, Finance and Operations and will lead the Accounting and Finance, Data Services, Information Technology, Project Management and Lean Process Improvement teams.

»» [ABRN.COM/NOTTE](http://ABRN.COM/NOTTE)

### STOP MEASURING AND START LIVE MAPPING

Measuring is a vital and time-consuming part of the vehicle repair process, but the right measuring tools can boost shop productivity.

»» [ABRN.COM/LIVEMAPPING](http://ABRN.COM/LIVEMAPPING)

### AASP/NJ WARNS MEMBERS AFTER VERMONT TECHNICIAN ARRESTED

AASP/NJ reminds shops that when using compromised parts in a car, the liability remains with the repairer — the insurer's refusal to pay will not count as an excuse in a court of law.

»» [ABRN.COM/WARN](http://ABRN.COM/WARN)

### ENTERPRISE RELEASES Q2 2015 CAR RENTAL DATA

The national average length of rental rose slightly in 2015 Q2, to 11 days overall. This is up .5 days over the 5-year average.

»» [ABRN.COM/Q2LORR](http://ABRN.COM/Q2LORR)

### NABC'S FREE PROGRAM CONTINUES TO GROW

NABC's First Responder Emergency Extrication program, which lets first responders practice extrication techniques on donated vehicles, continues its growth in the industry.

»» [ABRN.COM/FREE](http://ABRN.COM/FREE)

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## VEHICLE TECHNOLOGY

# Connected cars pose security risk

## Advanced connectivity exposes personal information, passwords to hackers

BY **BRIAN ALBRIGHT** | CORRESPONDENT

Connected car technology is slowly increasing its presence in the market, but some experts now warn that network-enabled automobiles may pose a security and safety risk.

"Automotive manufacturers are increasingly providing more connectivity options to the consumer by allowing them to connect to their cars, smartphones, wearable devices, homes and more," says David Miller, chief security officer at Covisint. Miller spoke at TU-Automotive Detroit in June about connected vehicles.

"These options are providing increased value to vehicle owners and manufacturers alike, but what most of us don't fully understand are the security consequences of exposing all of our personal information, data and passwords with this advanced connectivity," he says. "Connected cars need to offer unified and interoperable user experiences to keep driver information secure, which will not be possible without collaboration across the automotive and technology industries."

Last year, Sen. Edward Markey (D-Mass.) released a report entitled Tracking & Hacking: Security & Privacy

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## BREAKING NEWS

### SUSTAINABILITY

# AXALTA WORKS TO CONSERVE WETLANDS

Axalta is working to protect and conserve natural resources through a five-year, \$10 million wetlands conservation program with Ducks Unlimited — the world's largest non-profit organization dedicated to conserving North America's continually disappearing waterfowl habitats.

"Axalta and DU will both benefit from projects that conserve wetlands and natural resources," said Axalta Chairman and CEO Charlie Shaver. "Axalta is committed to engaging in sustainable manufacturing and practices, and to provide environmentally responsible products and application systems to our customers around the world, including expanding the availability of waterborne coatings. With sustainability and conservation at the forefront of

»» CONTINUES ON PAGE 10

Photo: Ducks Unlimited



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

*If it isn't CAPA Certified, it isn't a genuine replacement part*

Want to see what happens to a replacement bumper that isn't CAPA Certified? Check out the video at [CAPAcertified.org/crash](http://CAPAcertified.org/crash)

**[Connected cars]**

CONTINUED. FROM PAGE 6

Gaps Put American Drivers at Risk. The report outlined potential vulnerabilities posed by Bluetooth and wireless internet connectivity in vehicles that could lead to the loss of driver and vehicle data to outside parties.

"Cars were never designed to be secure, network connected devices," says Nick Gill, chairman of the global automotive sector at Capgemini. "The typical car has 50 to 100 electronic control units (ECUs), plus a significant amount of sensors, and each of those represents a potential connection point. The risk is that someone, for whatever reason, could get into the vehicle's systems through one of those ECUs and then access all of the others. The weakest point of those 200 nodes will be the point of attack."

In addition to potentially stealing driver or vehicle information, hackers could conceivably take control of vehicle systems that operate the brakes, headlights or speedometer readings, among other

things. They could also access location or driving history information. Hackers could also steal information related to freight being carried by commercial vehicles.

The nodes in the vehicle (which come from a variety of different suppliers) don't have the type of authentication or verification necessary to secure the data in the vehicle. The OEMs will bear the ultimate responsibility if there are breaches, Gill says.

According to Frost & Sullivan, 90 percent of automakers in North America have deployed connected telematics solutions. Machina Research predicts that connected vehicles will cause a 97 percent increase in data traffic in certain regions. The European Union is in the process of mandating eCall connectivity in all vehicles by 2018 to enable automatic emergency communications for every car in the region.

"While embedded connectivity is on the rise due to specific regulations related to telematics, shared data plans and smartphone-based connectivity will also gain prominence in the global mass market," says Frost & Sullivan Automotive

and Transportation Research Analyst Ramnath Eswaravadi. "OEMs wanting to compete with free smartphone-based navigation solutions are offering connected capabilities with dynamic re-routing, real-time traffic and point of interface services."

Sen. Markey called for new regulations to establish standards for vehicle data security. "Drivers have come to rely on these new technologies, but unfortunately the automakers haven't done their part to protect us from cyber-attacks or privacy invasions. Even as we are more connected than ever in our cars and trucks, our technology systems and data security remain largely unprotected," Markey said in a statement when his report was released. "We need to work with the industry and cyber-security experts to establish clear rules of the road to ensure the safety and privacy of 21st century American drivers."

The OEMs are in the early stages of creating a voluntary group to evaluate cyber threats for connected vehicles, according to the Alliance of Automobile Manufacturers.

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**[Axalta works]**

CONTINUED. FROM PAGE 6

our business, we look forward to doing great work with Ducks Unlimited.”

A waterfowl habitat conservation organization and a coatings company have more in common than one might initially think.

“There are a number of points where Axalta and Ducks Unlimited intersect,” states Matt Winokur, Axalta Global Vice President of Global Affairs. “Conservation is, of course, central to them all, and our manufacturing processes are a key contribution to protecting the environment. Our water-based refinish products rely on water and are designed to help the environ-

ment with lower VOCs. For OEM customers, our waterborne coatings apply faster and require fewer and lower heat bake steps – that saves energy. A number of our customers’ products are designed for recreation and sport, from snowmobiles and bikes to boats and outdoor grills. Last but not least, our customers and employees enjoy the outdoors and the wetlands provide a great storehouse of beautiful places to do that.”

Axalta utilizes environmentally friendly manufacturing processes, including air emissions abatement equipment, such as thermal oxidizers, scrubbers, dust collectors and vent condensers, to limit their impact on the air. Additionally, the company follows responsible management practices related to all wastes from generation through transportation and disposal and utilizes active pollution prevention and waste minimization efforts at all manufacturing sites that include employee involvement. All employees are trained in proper management of production materials and finished products to avoid releases and are taught how to safely and properly clean up and report releases if they occur.

DU Chief Conservation Officer Paul Schmidt said the partnership with Axalta fits seamlessly with DU’s Rescue Our Wetlands campaign. “We will start with priority wetland projects under the umbrella of the Rescue Our Wetlands campaign, focusing specifically on the Gulf Coast and Great Lakes Initiatives,” he said. “Our biologists and engineers will deliver crucial restoration work in these important breeding, migration, and wintering areas which are near some of Axalta’s major U.S. manufacturing facilities.”

Waterfowl wintering on the Gulf Coast will also benefit from Axalta’s support. Through this partnership, more than 15,000 acres of threatened coastal prairie wetlands and marshes will be targeted for restoration and maintenance.

“Helping sustain natural resources is critical to Ducks Unlimited, Axalta, and the people we touch,” said DU Chief Fundraising Officer Amy Batson. “We see this partnership growing and developing into a significant force for continental conservation.”

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# COLLISION REPAIR INDUSTRY Stats & Trends

78 percent of the vehicles bought by Millennials in the 2014 calendar year were used.



## Four alternatives to hiring a full-time CFO in your shop

The complexities of today's market require this position to help drive growth in your business

BY BRAD MEWES | ABRN BLOGGER

Your business's chief financial officer (CFO) should be driving growth and adding value in three main areas: historical financial and vendor analysis, current working capital and cash management, and future budgeting and investment analysis, including acquisitions.

One area I have not discussed, however, was the benefit the CFO brings to the table as an outside strategist and leader responsible for setting and implementing strategy in conjunction with other senior managers within the company. As the primary individual responsible for analyzing past and current financial data, as well as budgeting for future growth, the CFO has a unique perspective on the operations of the company.

### Checks and balances growth

Public companies are required to have an in-

dependent board to review the operational performance of top management. The purpose is to ensure that management runs the company in the best interests of shareholders rather than in their own self-interest. The separation of the board from senior management acts as a "checks and balances" system on corporate governance.



There are also checks and balances below the board at the executive level designed to create good corporate governance. While logistically it is good business sense to have executives responsible for operations, finance, marketing, etc. and led by a chief executive, it also makes good business sense to ensure that the CEO or founder is not required to make decisions in isolation.

Often the role of the CFO morphs into key strat-

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### Reproducing non-OEM finishes

By ART HARRIS

When replacing or repairing a part, sometimes you may need to refinish the backside or underside of the panel. An example is when replacing a quarter panel. When the trunk is open you can see the backside of the quarter panel and in some instances the OE has applied some paint to this area. Below are a couple of inquiries where we have asked the information providers if the refinish of the backside or underside is included in the refinish time.

#### DEG Inquiry 6128

**Area Vehicle:** Back side of quarter panel

**Issue Summary:** Audatex has labor listed for surface & edge but no allowance for backside of new panel

**Special:** This procedure would need to done prior to installation of the panel.

**Suggested Action:** I would estimate that 50 percent of the surface refinish labor and materials would be sufficient for refinishing the backside to OEM appearance.

**Audatex response:** Audatex does not provide refinish allowances for the backside of quarter panels. The refinish of the backside of the quarter panel would require a manual entry for this operation.

#### DEG Inquiry 3840

Vehicle//Rear body and floor

**Summary:** The paint time for the rear floor pan is 1.5 hours. Does this represent the paint time for the top and bottom sides of the floor?

**CCC response**  
**Estimated Release Date:**  
Closed

**Proposed Resolution:** MOTOR stated: After review, we have determined that the estimated refinish time of 1.5 hours applied to the rear floor pan is appropriate. According to the Guide To Estimating, underside refinishing is not included with basic color coat application.

MOTOR does not take the position that the underside of the floor should not be returned to pre-accident condition. However, determining the estimated work time to refinish the underside of the floor in various stages of completeness and quality, if refinished at all, is best left up to the judgment of estimators using an on-the-spot evaluation.

Please refer to page(s) G35 and G36 of the Guide To Estimating for a complete list of included/not included items.

*The Database Enhancement Gateway, also known as The DEG, is an initiative developed to help improve the quality and accuracy of collision repair estimate through proactive feedback from the collision repair industry and other end users to the information providers that supply the databases for the various estimating products. The DEG is created, equally funded and maintained by the Automotive Service Association, the Alliance of Automotive Service Providers and the Society of Collision Repair Specialists.*

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## THE COLLISION EXECUTIVE

MIKE LEVASSEUR

Early career lessons



MIKE ANDERSON

More on marketing

egist and advisor to the CEO. The role of the founder or CEO is often focused on managing the day-to-day challenges of the business, sometimes to the peril of longer term planning. In the collision industry, the CEO tends to be focused relentlessly on daily operations, client management, new client acquisition, employee retention, recruitment and KPI management. Because the CFO tends to be

once removed from this, the CFO has the luxury to provide a unique service as a de facto outside advisor to the company, but one with intimate understanding of daily challenges.

Despite these benefits, the CFO has traditionally been a role overlooked. However, the CFO is a role that is becoming increasingly necessary due to the growing complexity of the industry. Continue at [ABRN.com/CFOrole](http://ABRN.com/CFOrole).

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## Noteworthy

## CONVERSATIONS ON LINKEDIN

**Dustin McInnis, technician at Abedroth Paint & Body Shop, wrote:** I got a Tesla in today for a quarter panel repair. Any advice before starting repairs?

**Johnny Maldjian:** There is no database available to the public at this time on their vehicles. However, as an authorized Tesla repair center, we have all the information to buy parts and repair documents to complete any Tesla collision repair. If you have a client who needs help, please forward them my name.

**Bill Hawkins:** Send it to a Tesla-certified shop before you end up having to buy an \$80,000 car back.

**Iara Jose:** Do not panic. You will be able to do the repairs. Just pick the right tech and go for it. Everyone has to start somewhere.

**Johnny Maldjian:** What happens when you damage the quarter panel trying to repair it? You cannot buy the part because you're not an authorized Tesla collision center. The battery pack on the Tesla is approximately \$30,000. The labor to get it installed is another \$15,000. The battery has to be maintained throughout the repairs and charged. Do yourself a favor — take it to an authorized Tesla collision center.

**Vincent Ortega:** It sounds like Tesla's aluminum is not so different from any other aluminum car, but the electric side is a whole other beast. Why risk the loss of money for any problems that may occur? Plus, the shop is the one to warranty the repair.

**Joshua Caldwell:** Tesla makes an amazing car, but if you aren't certified you should pass this right to a Tesla certified shop. Tesla won't sell you the parts or provide any workshop information like WIS or TIS anyway. Plus, with that type of work, there is a high likelihood that your tech could be injured or worse killed, and a good chance you could damage the battery pack, which is very expensive. My advice is to pass to those who've been trained, much like if you hold any certifications you'd want someone without a certification to pass the work to you.

**Dustin McInnis:** I did fix it. Under the bumper there were two access holes so I was able to push it out and used the glue puller to finish it. I didn't disconnect the batteries and it came out pretty decent. The bumper is a pain to get off and on, and I don't look forward to doing another one.



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# Early career lessons

Always look for opportunity; also be on the lookout for potential sabotage

**I**n a recent column, I shared a little of how I got my start in this industry almost 40 years ago. In talking (and laughing) more about it with some family and colleagues, I realized there are experiences throughout my career that could serve as inspiration — or as a caution — to others growing their careers in this industry. So here's a little more about how I went from spraying cars overnight in a body shop during high school to eventually becoming a market vice president of a leading national MSO.

I mentioned in that previous column that my high school consumer economics teacher provided my introduction to the industry. One thing I didn't say, however, was that teacher also gave me an opportunity to restore his 1966 Corvair. He even allowed me to drive the car while the work was in process with the caveat that I only drive it back and forth to school — a limitation that, as a 17-year-old, I tended to stretch a little at times.

One time, for example, my girlfriend (now wife) and I were driving down a four-lane, 40 mph road in the Corvair when a tire suddenly went whizzing right past us. Just as I was thinking, "Oh my gosh, someone lost a tire," the car started to jockey and I realized that had been our right front tire. I managed to get the car off onto the median, and proceeded to search up and down the road to find all the missing pieces of the brakes, etc., and put it all together.

I remember telling the teacher, "You may want to check your brakes," when I gave the car back to him.

At the start of my senior year, I applied to what is now the Thaddeus Stevens College of Technology in Lancaster, Penn., where I was fortunate enough to receive a

full grant. I spent two years there, learning all the right ways to work on vehicles and unlearning a lot of what I had "learned" in my previous part-time work.

I graduated in 1980 and almost immediately landed a job at an independent body shop close to home. It was there I learned that while you should always look for opportunity, you also should be on the lookout for potential sabotage.

The first vehicle I was assigned at that shop was a local township police car. I was told to remove all the decals, fix all the dents and rust, and prep the vehicle for paint, including priming it.

I spent two days doing all the repairs and necessary disassembly. Near the end of the second day, one of the other techs told me, "You really don't need to work that hard." I suspect he was worried about me making him look bad.

When the car was ready for primer, I got it into the paint booth, at which point another older technician (who I'll call "Joey") said, "I do all the priming." I was pretty sure my boss had indicated I needed to do my own priming, but this was just my third day on the job as a 19-year-old, so I said, "Okay."

Try to imagine the very worst priming job you can; this one was probably twice as bad. I couldn't believe how much primer Joey was putting on — enough to run it to the ground.

A bit later the shop owner asked me, "What did you do to that car?" I told him that Joey had primed it — something Joey proceeded to deny.

"Why would I do the priming," Joey said. "I'm a heavy-wreck tech."

The owner called over another tech, a friend of Joey's, who backed up his friend by saying I'd done it.

I knew then that this wasn't a place I could continue working. The owner should have realized I had no reason to lie. I was a rookie. I could have easily blamed the bad priming (had I done it) on inexperience.

I quit that job and have always been determined to build a culture of honesty and teamwork within the shops I later had the opportunity to lead. ■

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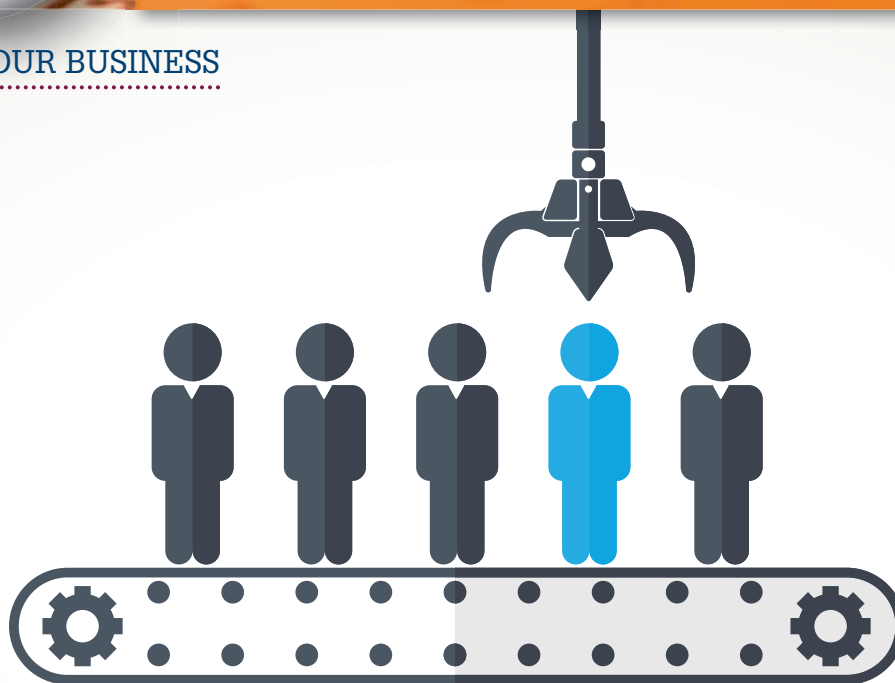
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## MINDING YOUR BUSINESS



## CHOOSING THE RIGHT TEAM

OWNERS AND MANAGERS ARE RESPONSIBLE FOR THE SUCCESS OF THE SHOP. IT STARTS WITH THE RIGHT TEAM.

BY DAVID ROGERS | CONTRIBUTING EDITOR

**I STARTED** my career in this industry as a service writer for Keller Bros. One day, Terry Keller pulled me into his office and offered me a position as the shop manager. It was a great opportunity — promotion, more responsibility, higher pay — but when he handed me a list of people I wasn't allowed to fire, I laughed and said, "No, thanks."

See, if I was going to manage these people — to take responsibility for their performance, their lives and their family — I needed to have complete authority over them, or I would never earn their respect.

As a retired military officer, I've led

teams of soldiers through difficult situations. But I can honestly say that leading a shop is even tougher than leading a team in the military. Stripes and ranks make it crystal clear who's in charge, but no system like that exists in the civilian sector. You'll never be handed authority with a title — you have to earn it.

As the manager or shop owner, you are responsible for the success of your team and of the shop. You need authority and respect in order to effectively manage employees. Just as important, you need to be able to create a great team of quality employees.

But where do you start?

### Screening applicants

Retaining quality employees starts before you even hire them. Everything from the job description to the interview should work to ensure you find the right employee — one that will be the quality employee you want to retain.

When you're crafting a job posting, think carefully about the type of employee that you want to attract. If your listing sounds like every other job description out there, you'll dilute your chances of attracting good employees.

From the very beginning, make it clear what you're looking for in an employee. If you require a specific certification, make this crystal clear in the



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job description, phone screening and interviews.

When you're looking for someone who is high quality, productive and loyal, use language that reflects those qualities in the application process. Ask for references and their work history. If they've bounced around from job to job, don't bother calling back — it's clear that they will not be loyal to you either.

If you're not screening applicants before an interview, you're wasting your time. It takes at least 10 applications before I'll find someone that is good enough to interview. And out of those I do interview, only 1 in 100 actually gets hired and becomes that quality employee that I wanted.

If an applicant doesn't meet your requirements, don't waste your time going through the full process.

### The Interview

Finding the right new hire is about knowing what you want and not settling for less. Before you even ask the first question, you should have deter-

mined the fatal flaws. Know your deal breakers, and don't waste your time with the wrong people.

For example: do you want somebody who will pencil whip inspections or take shortcuts during customer check in? Then ask enough questions to make sure that they follow policies and procedures.

Asking the right questions means thinking critically about what you're looking for before you step into the interview. Use a written set of questions that you've thought out ahead of time, but don't sound scripted over the phone. These questions are your guide to walk through every criteria you're looking for in an employee, while letting the conversation flow naturally.

When this person sounds like a good fit for your company, it's time to turn the tables. After you've listened and learned everything you can about the interviewee, it's your chance to teach them about you.

Show them your culture. Set clear expectations for their job, and be as spe-

cific as possible. Be clear about pay and benefits. Don't overpromise, or you'll lose the trust of your new employee right away.

For any quality employee, it's not just a job. This is where they'll spend the majority of their time each day. A good fit is as important to them as it is to you. Be genuine and honest. It's okay if the fit isn't there, as long as you don't waste your time or theirs pretending that it is.

### Train, retrain and train again

One of our clients once told me, "I cannot find an employee worth a [darn]." So I asked him about his training process for new hires. He laughed out loud. But when he realized I was serious, he said, "Any qualified employee should know how to do their job without me having to show them."

Then it was my turn to laugh out loud. It wasn't enough to find a qualified, certified employee — they needed to be psychic too!

Without taking the time to train a new employee, how can you expect

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them to understand what you want? Quality employees want to succeed, but they still need to know what that means to you and in your business.

The worst thing you can do is send a man onto the field and not teach him your game plan so he can help your team win.

### Is that employee ruined?

There's a big difference between a character problem and a behavioral problem. You can teach the right way to behave through training, but you cannot teach a person to change their character.

Poor employees can only pretend for so long before they show their true colors.

But before you kick a poorly-trained employee to the curb, ask yourself: Is that employee ruined or can they be saved?

Let me ask you a few questions:

When you tell your employees to come to work a specific set of hours, but you don't enforce the schedule consistently and fairly with every one of them, what are you teaching them?

If you ask them to answer the phones with a consistent and uniform greeting, but you never correct them or hold them accountable when they don't, what are you teaching them?

When you set up rules in your business but YOU don't follow them, what are you teaching them?

You need a good set of rules to follow in your business, and you have to enforce them. If you allow people to bend or break them, you're committing suicide for your business. It

lets the poor employees run the culture and prevents good employees from trusting and respecting your authority.

### Policies and procedures

Policies aren't harmful to good employees. The quality ones will follow all the rules, whether there is one or one hundred.

In a perfect world, we wouldn't need policies or procedures to run a great business. Everyone would automatically do exactly what they were supposed to do, exactly the way you wanted them to do it, every time. But we don't live in a perfect world.

Most policies are created because someone broke the unspoken rules. Bad employees take advantage of broken systems. But good employees continue to thrive. They weren't breaking the rules to begin with, and they don't mind the new system.

You need policies and procedures. They improve the work environment, improve employee satisfaction and sense of security, improve customer retention, improve production and process and reduce chaos.

Imperfect people can operate at near perfection when they follow a perfect process.

### Retaining quality employees

Keeping your all-star employees is about more than perks, vacation days, bonuses, or Friday pizza parties. It's about culture.

I said it earlier, but it's so important that I'll say it again here. For the best employees, it's not just a job.

The best cultures are ones that foster learning, serving and caring. Treat your coworkers and customers like family. Have opportunities to grow and develop on a personal level. Serve your customers and your community.

But you can't write a set of rules to dictate the culture. Culture must come naturally. Your policies and procedures can support the culture or hinder it, but they cannot force it.

As the owner, you need to do it first. You need to set that example, live the culture, be a part of the family. You have to hold yourself to your own rules. You have to live it, or you'll be doomed to fail.

When you're building your team of all-star employees, remember what matters most for your business. Use the application, screening, and interview process to attract quality employees and weed out the ones that won't fit with your shop. Invest the time to train new hires on your systems, expectations, policies and procedures so they understand how to succeed in your shop. Know that it's more than a job, it's the culture. You must lead by example and be a part of the culture you want to foster.

If you do that first, the good people will follow you. Quality customers and quality employees will seek out that culture, commit to it, and thrive in it.

You must do it first, then they will follow. ☺



**DAVID ROGERS**  
CONTRIBUTING  
EDITOR

David Rogers is chief operating officer of Keller Bros. Inc., president of Auto Profit Masters, and creator of the RPM ToolKit™, which integrates with shop POS software to help owners identify problems in their shop and get one-click training solutions.

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## MINDING YOUR BUSINESS



# MANAGING YOUR INVENTORY

**FOLLOW THESE FOUR SIMPLE STEPS TO MANAGE YOUR INVENTORY**

BY **ERIC HEISLER** | CONTRIBUTING EDITOR

**YOU KNOW** you need to manage your inventory better. You're just not sure how to get started. Here are four easy steps to help you begin:

## Successfully track inventory in your shop

1. Start with organizing your shop inventory.

Get all of your shop supplies in one location, your associated products in another, and your paint products in yet another. Neatly organize and label your inventory locations, making sure that your fastest moving inventory items are quick and easy to retrieve when needed. With this first step you can organize and begin to track your dry goods and paint, even if only roughly, and improve your inventory on hand and cash available.

2. Get a good count of your inventory.

Count everything that you may need to replenish from the first step. This is a good time to start thinking about how many of each item you actually have versus how many you actually need to keep on hand. The goal here is to minimize your product on hand but maintain a good level to assure you will not stock out of any product. A good inventory system will help you minimize your safety stock and keep your shop lean.

3. Consider purchasing software to help you track all your inventory activities.

Activities include generating orders, tracking consumption, handling transfers between inventory locations and replenishing stock as it arrives from the supplier. All of these activities can be tracked by a manual process, but are best handled with a computer system. Now is a good time to look into software that can help you manage your inven-

tory and streamline your processes. Using software makes sure all transactions are recorded consistently and reduces errors, while at the same time the software can prompt you at the appropriate times to handle the manual aspects of maintaining your inventory.

4. Implement rules for tracking your inventory and stick to them.

Set clear rules about dealing with your inventory process. If someone removes something from an inventory location, be sure it is logged into the system. If someone re-orders and then replenishes an item, make sure it's recorded in the system. This not only gives you the most accurate count of items in your inventory system, it also provides a log of items as they move through the system. Nothing is worse than having a system in place and then not logging all of the activity, which will cause your inventory to be inaccurate and make you go back

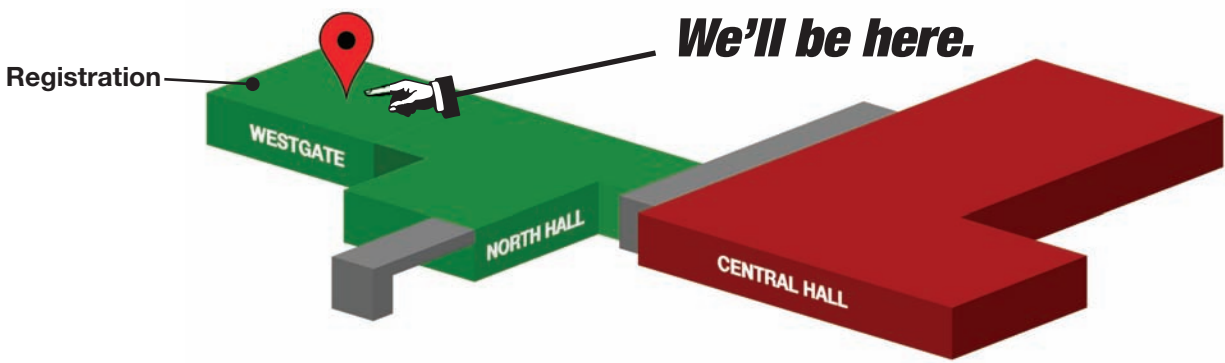
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to the step of manually counting your inventory.

### Benefits to tracking inventory

You'll find there are many benefits once you start managing your inventory. There will be less clutter in the shop, which in turn can increase efficiency. Reducing inventory is another benefit. This frees up shop space and also gives you more working capital. For example, we have a customer who started using an inventory management system and was able to reduce their paint inventory on hand by almost 40 percent after just two months. It allowed them to free up capital and decluttered their paint room.

Another benefit of utilizing an inventory management system is preventing stock outs. When you know exactly what you have on hand, you can make sure you don't run out of any items. A software system can also detect when you hit a minimum level of an item and place an order. Some systems allow you to set minimums and max-

imums for your inventory to suggest orders, which can be used to help keep your shop running at optimal levels.

Tracking your consumption is another benefit. You can track what was mixed or used on a job to aid in job costing. Some inventory management systems can take your paint consumption and use it to determine how profitable you are on any job so you can make sure you are optimizing your operation.

Knowing the exact valuation of your material on hand is another benefit to tracking your inventory. If you are using a software system, you can generally get this valuation with a simple button click that gives you a snapshot of your inventory at any given time. If you are not using software, the valuation can be determined by multiplying each of your materials on hand by its cost. Either method will give you an accurate valuation of your inventory.

Lastly, managing your inventory helps prevent misuse and theft of paint and all other materials. Simply put, if someone knows their product

usage is being monitored, they are less likely to over consume paint and materials used in the paint process, and this should even act as a deterrent to theft.

Managing your inventory sounds like a lot of work, especially if you've been in business 20 or 30 years and don't have a system in place. With help from your paint supplier, a software system and with a little bit of organization, you'll see the benefits of managing your inventory to help you achieve your goals of improving your efficiency and profitability. 📧



**ERIC HEISLER**  
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EDITOR

Eric is the eBusiness Product Manager for the North American automotive refinish business of BASF. He started with BASF over 10 years ago as a software engineer. Eric was instrumental in developing an inventory module for BASF's SmartTRAK system.

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## MINDING YOUR BUSINESS

# INVEST IN WELLNESS



## IMPLEMENTING AN EMPLOYEE WELLNESS PLAN WILL POSITIVELY IMPACT PRODUCTION AND PROFITABILITY

BY **BRIAN CANNING** | CONTRIBUTING EDITOR

**ON THE ONE** hand, having a business plan that sets performance goals for items such as sales, production and profitability is critical to our success, but too often our greatest resource — our staff members — are an afterthought and little or no thought is given to their well being or health. Every year the automotive repair industry loses millions of dollars in sales, productivity and profits to a lack of attention to employee wellness, though study after study shows that investment here provides a huge opportunity for a strong return. Investing in the wellness of our technicians, service advisors and service managers is definitely worth the effort, not only for them but for our shop and for the industry as well.

Have you ever had a technician who smoked or abused drugs or alcohol? Whether or not you want to know about or acknowledge the negative impact smoking, drug or alcohol abuse can have on our staff and therefore our shop, all three are common behaviors having a major impact on the workplace across all industries in the U.S. These behaviors are also, without a doubt, in one way or another impacting our sales, our profits and our productivity. That

minor cold that turns into bronchitis and a weeklong absence could be a challenge smoking brings to our workplace. It is very difficult for that technician to be productive sitting at home on his couch. The impact of alcohol on our service operation is just as bad, if not worse. By promoting employee wellness, and in this case, smoking cessation along with drug and alcohol programs, we could contribute significantly to the health of our staff members and our viability as a business.

It would be easy to say that wellness is not our concern as shop owners or managers. But just as our service advisors and technicians need to contribute to the viability and survival of the shop to ensure their own wages and continued employment, we as shop owners and managers need to contribute to the efforts and well being of our staff members to ensure our own success and survival. Along with providing quality shop equipment and a good working environment, we need to invest in the health of our staff members and develop a wellness plan that will enhance their efforts, encourage improved behaviors and ensure their consistent and best effort.

Like everything else that we do, employee wellness programs cost money, but unlike a lot of the things we spend money on in the automotive repair world, wellness programs have the potential to provide a very strong return on investment (ROI). This is most clearly visible in reduction in both shopkeepers' and healthcare insurance premiums, as well as reduced absenteeism and improved productivity. In study after study it has been shown that wellness programs can reduce healthcare costs and costs associated with absenteeism from 25 percent to 30 percent within 3.5 years of inception, all of this without the additional benefits of improved morale and retention. This ROI comes from lower health insurance premiums, reduced worker compensation claims, reduced absenteeism and increased productivity. Believe it or not, employees tend to feel good that their employers are making the effort and taking an interest in their wellness, which takes the very positive effects of quitting smoking or weight

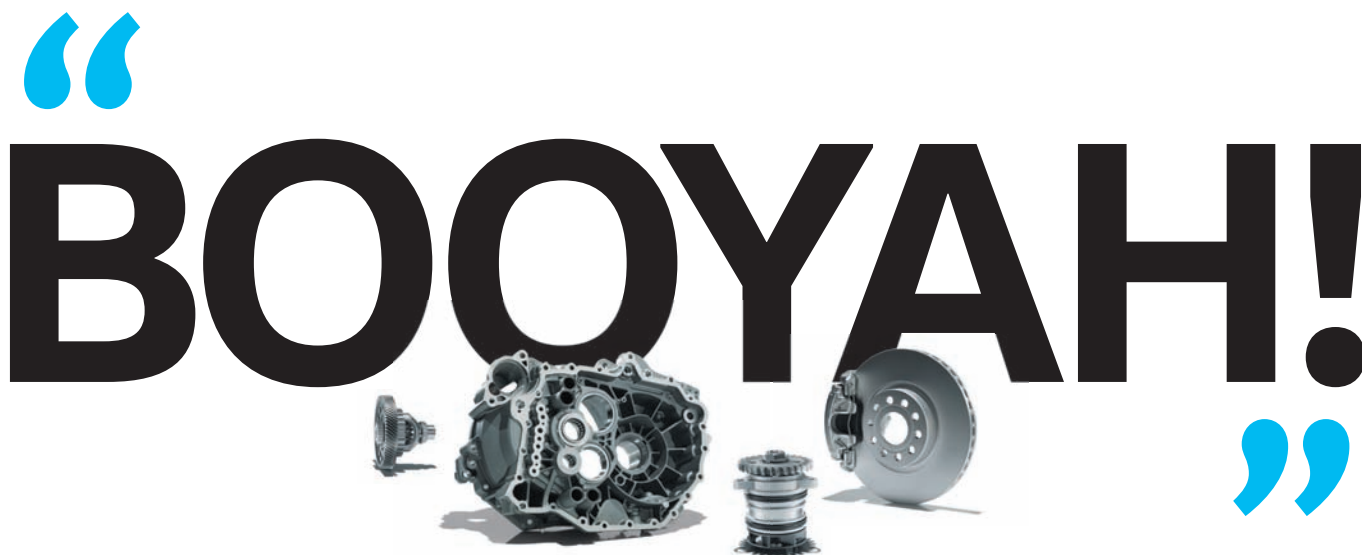
loss and magnifies that impact by giving our staff things to feel good about and reasons to stick around and work smarter and more productively. What's not to like about that?

Wellness plans use a variety of methods to encourage employees to become healthier including health appraisals, counseling and weight-loss programs. Some provide financial incentives for participation and many companies create an environment that promotes healthy behavior with smoke-free zones, on-site fitness facilities and free gym memberships for participating employees. Remember that studies have shown again and again that these wellness programs will generate a tangible return for us and for the business, so be creative and thoughtful in whatever directions you move and make your effort toward improved employee wellness relevant to you, your shop and your staff. If you have no smokers on staff, having a smoking cessation program will probably not be that impressive. However, if you have

a couple of guys who are overweight or struggle with the bottle, it might be a great thing to have a weight-loss program, free gym memberships or drug and alcohol counseling included in your plan. Another very important step is our full commitment and participation in whatever we do. If our staff members see us, as shop owners and managers, losing weight or quitting smoking, our plan has a much better chance of having an impact and delivering that ROI we talked about. Talking wellness is one thing, but walking that walk is another.

No two wellness plans are alike. We need to make ours unique to our shop and our staff, with goals and expectations that suit us. We need to find our own way of spelling success and find ways to make the success of our staff members within the wellness plan part of our success as a shop. Their success, improved health and availability to work are as big a win for them as it is a win for our shop.

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behavior and are very useful in helping us measure commitment and success. A very important step is getting your staff interested in participating. Your actions and commitment here are crucial to making employee wellness something our employees will care about. If you care, I can promise you they will.

A great place to start in developing

a wellness plan is with your healthcare provider. If they are unable to come up with a plan that works for you, find somebody who can. A Google search will yield any number of providers. The right plan is definitely out there.

Successful wellness programs incorporate some or all of the following elements:

- A company sponsor (that's you!)
- A comprehensive plan design
- Commitment and leadership from the top down
- Assessments of employee health status, identifying risks or concerns
- Individual counseling on assessment results, especially for high-risk employees
- Risk-management strategies
- Incentives that are relevant to our staff members
- Proposed Changes (A published plan)
- Efforts to maximize participation (make it "Our Plan" not "My Plan")
- A continuing commitment and leadership toward employee wellness

More than that canned marketing plan you just had to have and way more than that gas analyzer you bought last year that nobody uses, creating and implementing an employee wellness plan will have a very positive impact on your sales, your production, and your profitability; but don't do it for that. Do it because your greatest resource, your staff, deserve it and will benefit from your care and concern. If you take care of them, the sales, production and profitability will take care of itself.

Think of what you could do if three and a half years from today you were paying 25 percent or 30 percent less for health insurance, your staff members were missing far fewer days of work each year and as a result of this, and you were generating 10 or 20 more billable hours per week. I am guessing maybe you could find something to do with that money and could easily live with the improved operation and reduced stress.

Employee wellness is not about them. It's about us — all of us. It's the difference between being a good shop or a great one. Which do you want to be? ☺

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**BRIAN CANNING**  
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Brian Canning is 30-year veteran of the automotive repair industry. He has been a leadership coach, Goodyear service manager, retail sales manager for a distributor, run a large fleet operation and headed a large multi-state sales territory for an independent manufacturer of automotive parts.

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## MINDING YOUR BUSINESS

# CUSTOMER SERVICE IN THE SOCIAL ERA



## FIVE KEYS TO MASTERING YOUR ONLINE REPUTATION

BY MICHELLE BIZON | CONTRIBUTING EDITOR

**WITH** today's digital reliance stronger than ever, it's impossible to ignore how your online reputation plays a role in the public perception of your shop. Consumers are putting more and more trust in online reviews — almost equaling the weight they give personal recommendations from friends and family. According to a 2013 BrightLocal Consumer Review Survey, 79 percent of consumers place equal weight on both online reviews and personal recommendations.

### Take responsibility

It's essential to have profiles on each of the foremost social networks and review sites (If you're a franchisee, check your corporate policies before proceeding). Claim your shop's listings on major review sites like Yelp and Google Plus and remain active on content sites like Facebook and Twitter. Just "having the lights on" isn't enough. Establish

your presence now, lest you be forced to learn the ins and outs of a network should crisis strike.

More importantly, creating profiles allows you to tweak your notification settings, allowing you to choose to be alerted about customer activity involving your business listing or page. Doing so gives you the opportunity to respond in a timely manner.

There are thousands of social networks and review sites out there — not to mention millions of blogs — so, obviously, you'll need to prioritize your time and resources. If a particular review site doesn't show up until page 20 of your Google search results, you shouldn't pull out your hair over it. You can catch many new mentions by setting a Google Alert for your business name and city, and free social listening tools like Topsy can help notify you of the occasional mention coming up from the depths of the Internet.

### Respond publicly and quickly

Remember, how you handle reviews doesn't affect only the reviewer. Potential customers and even current customers are checking out your review sites, even if it's just to look up your hours or phone number.

Your responses should send a clear message: We care about our customers' satisfaction and will go above and beyond to ensure each compliment, question and/or complaint is addressed. We've seen that personal attention does more for a business than posting a sales-y "Our service is the best in the world" message.

If you received a positive review, congratulations! Be sure to express your gratitude to your customer by posting a public response to thank him or her for taking the time to review you. Doing so will strengthen your relationships with these customers and make them more likely to advocate for you in

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the future. It can also encourage other happy customers to leave reviews themselves, because they know they'll receive that same treatment.

If you received a negative review, the first thing you should do is take a look into the experience described by the reviewer. Are the comments valid? Which of your staff members interacted with the customers, and what are their takes on the situation?

If your business was in the wrong, apologize and take personal responsibility for resolving the issue. Outline what you're going to do about it — we've seen anything from issuing a genuine apology to immediately dismissing a disrespectful employee. Most customers just want to feel like they're being heard, and they'll appreciate the personal attention.

If the customer was wrong, then you need to outline all of the information you gathered about the situation in a matter-of-fact, respectful manner. Oftentimes, it's a misunderstanding. The customer may be confused about

something, and leaving the review was his way of venting. Records are your friend here. Do you have a copy of the invoice? Can you take a look at the security camera in the corner and verify (or debunk) what was described?

I handled a review for a customer once in which the reviewer accused her auto technician of smoking in her car. The security footage showed it was actually her husband. Now, that's a delicate situation in and of itself, but it really describes how your response as a business owner can affect your reputation — to your benefit or your detriment.

### Listen and learn

Positive or negative, reviews from customers can also be a valuable learning tool for you and your team. It's easy to see your shop through rose-colored glasses, especially because it occupies so much of your consciousness on a daily basis. Reviews can provide a new, more objective perspective.

If your customers all rave about your

accommodating hours, you'll know this will be an irresistible hook for attracting new customers. You can then play it up in your marketing materials, when, otherwise, you may have focused only on your customer service skills or the certifications of your technicians.

If you start seeing a pattern with the same issue coming up again and again, then you have a business problem—not a review site problem. Your customers will tell you what's important to them, be it a rude receptionist or the vending machine in the waiting area being empty. Learn from their feedback and make the necessary changes in your shop.

### Ignore the trolls

There may come a time when, despite your best efforts, you find your customer unwilling to engage with you in a respectful dialogue. It's reasonable — and warranted, even — to feel defensive. You pour your blood, sweat and tears into your shop daily, and someone's attacking it! How dare he!

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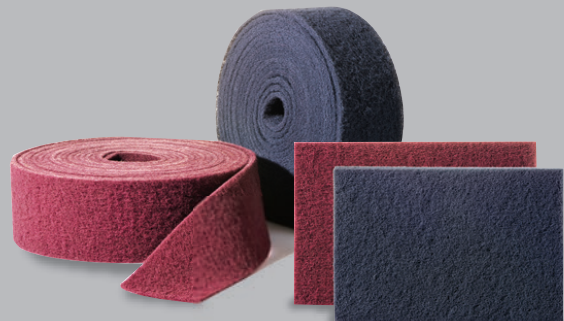
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Now, a pep talk. Your customers aren't stupid. Or crazy. One complaint or a temporary dip in your Yelp rating won't send them running for the hills — unless you give them a reason to do so by dealing with a situation poorly. Users are pretty savvy and want to see the overall picture of your business, so a negative review isn't the end of the world.

And if a customer turns into a troll? Your time would be better spent attracting others who fit your ideal customer profile than trying to win over the rabble-rouser.

### Be proactive

Practicing quality customer service online goes beyond just listening to your customers and responding to reviews.

The best way to ensure you're being found is to claim your business listings and make sure all of your information is updated. Check your business name, address, phone number and website, in particular. Also, you'll want to add a brief description of the services you offer — most sites include a bio section — and fill out all fields related to your services completely. If someone is searching for a shop that offers a shuttle service, and you forgot to include that, you're probably not going to show up in their search. Don't forget to add photos with captions that'll help prospective customers see what life is like at your shop either.

To generate more and/or better reviews, first focus on awareness. Many happy customers don't realize you need their help; and, even if they do, they don't know how to help. Train your staff members to ask customers to review you. For example, after turning the keys back over to a customer, your tech could say, "We're always looking for feedback for how we can best serve you. We'd love to hear your thoughts about your experience on Google Plus." Reinforce the message by putting the site(s) of your choice on your receipts, invoices, brochures, flyers and whatever else you hand out to customers. If you have an announcement screen, put it up there, or put a sticker in the window. The same applies online. Link to the sites from your website and cross-promote your review sites on Facebook, Twitter and Google Plus.

We caution you to avoid overwhelming them with information, so ask for just one thing. Don't say, "Please review us on Yelp and Google Plus and Citysearch and...etc." Focusing on one thing at a time will get you better results.

### Final thoughts

As in the "real" world, the best way to manage your online reputation is to provide an excellent experience for your customers. There are no shortcuts, but the more committed you are to quality customer service, the more likely you are to attract customers who will become loyal advocates for your shop for years to come. ☺



**MICHELLE  
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Michelle Bizon is the Social Media Manager at Moving Targets. Her team helps hundreds of businesses engage their community, protect their online reputation and define their competitive advantage. Moving Targets is a print and digital marketing firm with more than 20 years of automotive industry experience. They help businesses build trust through campaigns that seamlessly blend print and digital messaging to reach customers at home, at work and on the go.

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# SHOP PROFILE

A snapshot of one of the industry's leading shops

CAPITAL COLLISION CENTER / HELENA, MONT.



## Location is key

Montana shop forms valuable associations while building business

BY JAMES E. GUYETTE | CONTRIBUTING EDITOR

**B**ig Sky Country is providing a vast amount of personal and professional satisfaction for Bruce Halcro, owner of Capital Collision in Helena, Mont.

"I have *that view* right out of the window of my office," he says. "Helena's economy is very stable. A lot of people work in state government — they aren't getting rich, but everyone's making a living and it's beautiful. I love living here."

Originally from Great Falls, Mont., when it came time to open his own shop Halcro deliberately chose the state's capital as the most suitable location after conducting a significant amount of demographic research regarding a base of potential customers.

"I looked at economies that weren't as hard hit. I thought that was important," he recounts, venturing into an uncharted territory of sorts. A friend from high school had settled in Helena, "but other than that, I knew nobody."

Halcro embraced his new community with great enthusiasm, sponsoring local athletic teams and getting involved with numerous civic and charitable activities. "It's important to give back when you can," he explains.

"I'm in a town of 45,000 people — you have to build a customer base." An ambitious ongoing media campaign has

proven to be an effective method for getting the word out. "I do a lot of radio and television. That's worked really, really well for me."

His 10- and 12-year-old grandsons have generated a following of their own as stars of the TV commercials. "The viewers want to know how they're doing and they're watching them grow up."

"The big thing conveyed in the advertising is the training and equipment and the service they get when they come to our shop."

In a region populated with a sparse pool of experienced candidates willing or able to become technicians, Halcro's latest project is setting up his own in-house training program to reach and motivate promising high school students.

"We have our own team system that puts an apprentice with an A tech to help bring them along. It also allows our A techs to concentrate more on the A tech repairs and have the apprentices doing more of the lesser-skilled work. We try to make sure all the employees know we value them and provide a good benefit package along with a good wage," he says.

### AT A GLANCE

#### Capital Collision Center

Name of shop

**Helena, Mont.**

Location

**1**

No. of shops

**16**

Years in business

**14**

No. of employees

**14,800**

Shop size (square feet)

**23**

No. of bays

**6 days**

Average cycle time

**\$2,950**

Average repair order

**\$63,000**

Average weekly income

**\$3 million**

Annual gross revenue

**www.capitalcollisionmt.com**

Website

"We are very big on training — continued training is a condition of employment and this is discussed with all new hires; it is not optional," Halcro emphasizes.

"We not only pay for the training but we also pay the employee for the time while attending any training. One of our other conditions we discuss when they come to work for us is to keep their work area clean — cleanliness is very important to us. We oftentimes take



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potential customers for a tour of our facility, and it has worked as a very good sales tool," says Halcro.

"Making sure the technicians have the training and equipment to properly repair today's complicated vehicles is one of our top priorities. Customers should always know that we work for them and they have a very strong ally working for them during the repair process. We believe our experience in the collision industry is a huge strength at our company — from the office staff and estimator to our technicians and paint department. We also have implemented several checks and balances to assure proper repairs throughout the repair process."

### Accuracy and efficiency

Procuring the proper components in a timely manner is an ongoing challenge. "I have some good competitors and I'm friendly with the competition. There aren't a lot of dealerships with parts, so we all use the same suppliers from out of state." Spokane, Wash. and Salt Lake City are the prime points of origin. "They've figured out how to get deliveries to me overnight."

These long distances, of course, severely limit the availability of hot-shot drop-offs commonly utilized by other industry businesses in areas with denser development and higher populations. "It absolutely slows us down," says Halcro, "but what really slows us down is the aftermarket parts that don't fit."

Parts ordering is precisely accomplished via email after careful consideration to ascertain exactly what is needed for a particular job. "When you're working in a rural area like us and you're ordering parts you have to eliminate any mistakes that you can. We work on that in house. We try to diagnose accurately, and then we deal with the vendor."

And although it brings a certain amount of discomfort, over the years Halcro has dismissed suppliers that fail to measure up to his standards of appropriate accuracy and efficiency. "That's kind of tough because you have personal relationships with a lot of these vendors."

While national weather reports frequently cite Montana as experiencing the worst in winter conditions, Halcro dismisses such scenarios and neither seeks nor offers any sympathy. "This is

Montana! We work through that; we don't have 'snow days' at school."

Pickups and SUVs are popular vehicle choices among the customer base. "Winter weather obviously impacts our workload, as does animal hits."

A strong point in dealing with insurance carriers is Capital's documentation and quality of repairs. "They know we are going to do a complete and thorough repair and we will have accurate and complete documentation to support our final bill. The fact is that when the car is done they can close the file and know the repair has been properly done."

The company "made the commitment to be environmentally friendly long before any regulations requiring us to do so." The shop started spraying waterborne paint in 2011, "not because we had to, but because we are committed to doing what's best for the environment."

### Assessing the business

Halcro began his career in 1978 upon graduation from a trade school in his hometown of Great Falls. After serving an apprenticeship at a small independent shop, he moved on to a larger operation, Flawless Auto Body, which was owned by Pat Tracy at the time. "Pat was a very forward-thinking shop owner and was a guy that wanted his shop to be properly equipped and his techs to be trained. After a couple years I went to work for a Chevrolet dealership in Great Falls as a tech and about a year later when the shop manager position came open I was given the job as manager. There I got my feet wet writing estimates and dealing with insurance companies," he recounts.

"The owner of the dealership, Bob Oakland, is one of the smartest businessmen I have ever been associated with and I learned a lot from him — using some of the lessons I learned from him in my business today. I was there for seven years and decided to move to Billings, where I worked a short time for a dealership, then to another independent shop. In 1998 I decided it was time to look for my own shop, so in 1999 a partner and I bought the shop in Helena where I am today. In January of 2007 I bought my partner out, Bob Perrin, who was a very talented painter."

The location on Euclid Avenue had been in business as a body shop for about 20 years. The original structure

was 9,800 square feet. In 2011 Halcro purchased the property and building next door, and after some remodeling and upgrades it added another 5,000 square feet to the footprint. The newer facility houses the collision repair area. The older portion includes the office, detail and refinish departments.

"As I began to assess my shop and business I realized I needed to get better at what I did as a shop owner/manager. I had always felt it was important to train my techs, but for the first time I decided to focus on training for myself. I began to attend more estimating classes."

The Montana Collision Repair Specialists (now the Montana Collision Repair Association) provided training during the organization's meetings. Halcro started to become more involved in 2004 when Max Yates, a shop owner from Butte, assumed the MCRA's presidency. "Max became a great mentor and has become one of my best friends and a guy I have huge respect for."

In 2008 Halcro himself became the MCRA's president, serving six years in the leadership position. In the meantime Yates and Halcro were attending events conducted by the Society of Collision Repair Specialists, with Halcro consequently being asked to fill a vacant position on the SCRS board of directors.

"That began my time as an SCRS board member — I cannot even begin to say how thankful I am to SCRS and all the outstanding board members who work so hard to help make a difference in our industry. I would love to mention them all but I am sure I would forget someone — but my gratitude to them is enormous. I am still an SCRS board member and on the MCRA board as the past president, and I am very proud to be associated with both associations. I owe a great deal of thanks to all of people who have helped and guided me on my journey in this crazy industry." ❧



**JAMES E. GUYETTE**  
CONTRIBUTING  
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# Develop and maintain SOPs: Part 2

Processes can help manage customer relations and staff performance

BY **KEITH MANICH** | CONTRIBUTING EDITOR

Last month (*Develop and maintain standard operating procedures: Part 1*), we looked at the ease of use of standard operating procedures (SOPs) and how to simplify their creation. The focus in part one was how to work with customers and how to make

sure the customer experience was as seamless and productive as possible. It's important to remember you have two kinds of customers: internal and external. So the question becomes, "How do we manage the internal customer and what can we build to help them with stress reduction?"

The answer is to develop a repair SOP, using very much the same process as we saw in part one. However, it becomes more technical because the process involves following specific repair procedures, a critical eye on repair quality and ultimately the success or failure of the repair. As we look at this SOP, we will take brief looks at how estimating, quality control and some unusual cost factors impact the SOP even though it isn't readily apparent why.

So let's do a quick review of the key areas for developing the SOP:

1. Clearly identify what must be done.
2. Notify those responsible on what their tasks are.
3. Provide information relative to the proper completion of the tasks.
4. Identify the documentation requirements.
5. Identify proper tools and equipment.
6. Identify and establish quality control requirements.
7. Identify inspection requirements before release to the next tech.

So as we review, we see that the keys to development use many of the same steps with the only differences being the information that is provided, where it comes from and how it's provided within the process steps. Remember the key is still "to be consistent and repeatable in your processes so that it becomes an expectation of a specified performance."

### Identify what needs to be done with a detailed repair plan

Providing a detailed repair plan won't be the task performer's duty in this scenario. Rather, it will be provided by the repair planner or estimator. What is critical here is that all necessary repair process information is gathered from relevant sources and bundled. This set of documents, in which all repair steps are identified, goes with the estimate to the repair technician. Why is this important? It allows shops to properly schedule their time and ensure repair plan accuracy.

Many times the technician will have the skills and experience to complete the repairs, but the estimator and the repair technician must be sure that any changes for the vehicle that is being worked on are properly identified. The old "I've been doing this for 20 years" doesn't apply any longer. Each vehicle, the accompanying repair processes and all diagnostic and repair checks must be reviewed before each repair. This

will ensure that the vehicle is repaired using the most up-to-date information, therefore ensuring that the vehicle is in fact returned to preaccident condition and performance.

### Notify staff on what their tasks are

A morning and early afternoon meeting should be regular practice in any repair facility where multiple vehicles are being repaired and time is an important factor in satisfying customer needs. These should be meetings that include all of the production staff so that each knows what they are responsible for and when. These meetings should include a separate meeting held initially between the estimator/repair planner and the technician.

The information that was identified when writing the repair plan and the expectation for the performance requirements must be discussed with the technician. This must be a standard practice. Each technician needs to know that time was spent researching repair procedures. If anything is identified as unusual or changed, or a new practice is to be done, they need to understand why they can't circumvent the process and skip required steps. A review makes it less likely this could or would occur.

Although not typical, mid-model year changes in design, parts, components and repair procedures can occur. If the materials aren't reviewed, the potential for even a catastrophic repair failure may exist. Avoid that by following these steps:

1. Proper vehicle identification
2. Proper repair process identification
3. A thorough review with the repair technician

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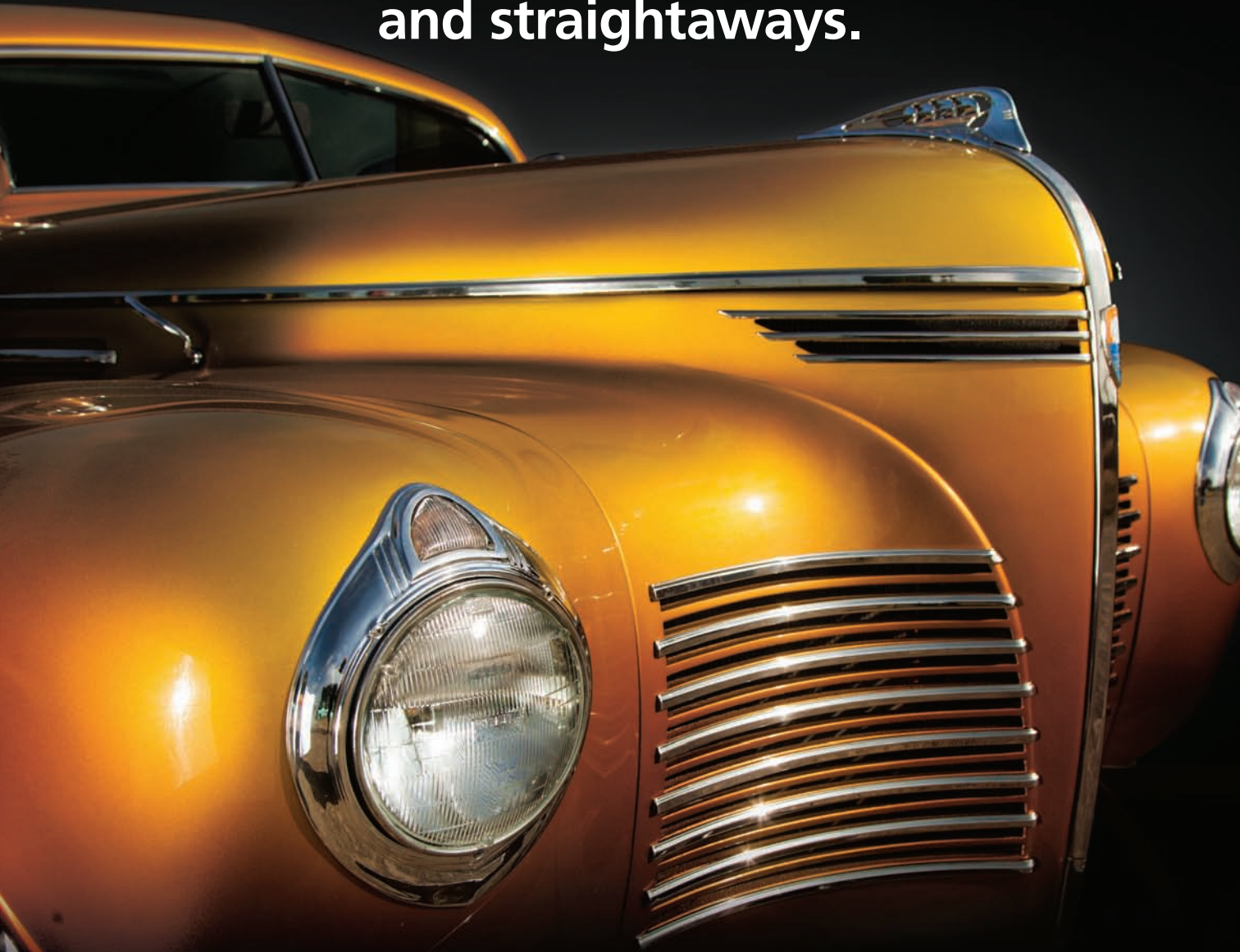
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4. Proper identification of parts
5. Scan toll diagnostics as required by the OEM

Any changes after the initial meeting should always include the same individuals as the initial meeting as well as being documented for supplemental consideration and notification.

### Provide information needed to complete these tasks

The required tasks that are assigned to the production staff must be clearly communicated to avoid gaps in the repair process steps. As part of the SOP, it is sometimes necessary to communicate tasks in writing, or by printing estimate copies for each technician with their assignment highlighted. It may seem that this is additional work, but avoiding the chance of missing tasks is actually a time saver and can also be a way to avoid in-process delays by clearly specifying individual repair assignments.

It's also a benefit to the receiving technician (the next one in line for the car) to have a checklist that must be completed after each repair step. When used properly, these tracking checklists can immensely improve cycle time and quality, and ensure that no process steps are missed. Most significantly, in-process "come backs," which plague the high production world, seem to be eliminated by this step in the process. Savings in paint and materials, and in allied chemicals and paper, are significant.

### Documentation requirements

What should you be documenting? Well, everything! It's important to make sure that you cover all of your bases. This includes liability. Make sure that you have all of your procedures documented and that the information is specific to the production date and VIN not only for the car you are repairing but also any car you write an estimate for. This can cover you in a number of ways, but let's look at them one at a time:

- Repair procedure identification. The vehicle construction, specific parts, reinforcements and most importantly the materials that the vehicle is made of and the material locations.

- If there is any chance of a third party interfering with the estimate by reducing operations or hourly rates, or by nonrecognition of essential operations such as zero point calibration or other very necessary and very required scan diagnostics.

- Glass removal or other operations that might have significance in FMVSS investigations after the fact. These include glass installation, changing of federal standard requirement parts such as airbags, exhaust and other federally mandated equipment.

Always take the time to make sure that conversations that take place with outside influencers are documented in the event that you are required to bring them up at a later date for whatever reason. You are in an environment where it is easy to forget conversations, so write them down. You never know when that information may become useful for either internal or external customers.

### Identify proper tools and equipment

Familiarizing yourself, the estimator, the blue printer and all the technical staff with any new tools and equipment when they are purchased is important. But there may be things that are already in the store that some may not even know are there. This equipment could be a timesaver and more importantly could be necessary for a repair and not be recognized for it. When you conduct your meetings if there is a tool like this that the staff has identified as being specific for a repair process, show it at your meeting. Identify what it is, what it could be used for and most importantly, how it could reduce repair time.

With the advent of rivets, bonding requirements and other recently added repair processes, it is important to share repair tool information just like we do repair processes. It may change the technician's outlook on the repair in general and the approach to the repair more specifically. Some people are still reluctant to try new things. To use an old phrase—"You can't teach an old dog new tricks." Unfortunately, that dog is going to need to stop repairing collision damaged vehicles. Each new type of vehicle construction requires new methods of repair, tools to repair with and skills to accomplish tasks. Those who don't want to learn and follow the SOPs identified for these processes may need to change trades. This one requires skill, thinking and the ability to change with the times.

### Identify and establish quality control requirements

Quality control is the single most important production tool that we have. Of course this only works when we can depend on it being used properly. Any-

## SMALL CHANGES MAKE ALL THE DIFFERENCE IN SHOP EFFICIENCY, PROFITS

BY AL THOMAS | CONTRIBUTING EDITOR

*As with many competitive activities, success comes down to finding the small changes that can greatly affect the end result. At the Indianapolis 500 or in the Olympics, the race is often won by tenths of a second. In business, specifically the collision repair business, finding changes that shave small amounts of time or cost off of each job will markedly improve the profit for each repair and the overall profit of the business.*

*Many operations view standard operating procedures (SOPs) as helpful; but not many have taken the time to establish procedures for each type of job. Operators often look at the task of creating SOPs as more work than they are worth. Some get bogged down with what they perceive as an impossible job: to write a procedure for each type of job that comes into the shop.*

*If you think having SOPs means that you must have a procedure for how to change every make, model and year of door skin, you would be correct in deeming it a never-ending job. But SOPs are useful for large categories of jobs, such as masking, surface prep, new part replacement, welded-on part replacement and air conditioning evacuation and recharge. When using established SOPs, the shop can increase productivity, reduce cost, increase quality, reduce job time and build a sense of teamwork within the shop. Engaging employees to help build the SOP also further helps ensure it is followed.*

thing less than 100 percent quality control is a disservice to the business, the owner, but most importantly to the customer. Think about quality control as first time through repairing. It reduces costs, reduces potential legal exposure, reduces additional rental expenses and reduces the potential of bad CSI. With that said, it is a tool that costs nothing and provides maximum return on investment.

When the quality control process is deeply ingrained in the production SOP, it reduces the possibility of someone not taking the time to complete repair operations

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using the proper repair methodology, for fear of being exposed as “the one” who didn’t do something properly.

Demand that accountability and build it into the SOP. That may or may not include some sort of penalty when the quality process is breached.

Each segment within the repair processes already has SOPs that have been built by paint companies, allied material providers that when used will help you in establishing the requirements for your SOPs. Items such as sanding to a specified grit is one of the areas that seem to be a lightning rod for opportunity, since not meeting this requirement backs up the paint shop and keeps the work flow stagnant.

It is important to look at each potential “choke point” and determine what will avoid the “choke.” That means analyzing each process step and determining if it is people or process that is the issue, and once the solution is determined, inserting it into your SOP to build in a standardized practice that will be sustainable over time. It will take management to ensure that the

sustainability continues, but the buy in is the hard part.

### Identify inspection requirements

The inspection process can be done several different ways:

- Self-imposed by the repairing tech
- Observed by the receiving tech
- Management observed by a production manager

This can be accomplished through a variety of visual indicators being used to show it’s either ready or ready for inspection. Cones, flags, lights and many other items have been repurposed to show that a vehicle is ready to move to the next production location. The important point of this exercise is to show that the vehicle has been reviewed and observed and is ready for the move to the next location. That means “come and look at it and tell me it’s ready.” Review before movement is the compelling point. Don’t let it go to the next tech when it is not ready. The SOP should stress this aspect of the process. This avoids any production back ups.

So let’s review again:

1. Clearly identify what needs to be done.
2. Notify those responsible for a particular work product what their tasks are.
3. Provide information relative to the proper completion of the tasks.
4. What are the documentation requirements?
5. Identify proper tools and equipment.
6. Identify and establish quality control requirements.
7. Identify inspection requirements before release to the next repair technician.

Develop your SOP by clearly defining the production parameters that you will be looking for your staff to maintain. Quantity, Quality, Performance Standards, Documentation and Materials. These are all measurable factors in the repair process that if observed and maintained will not only provide stability by having a sustainable SOP, but will result in quality-driven repairs that go through the store first time, every time. ☺

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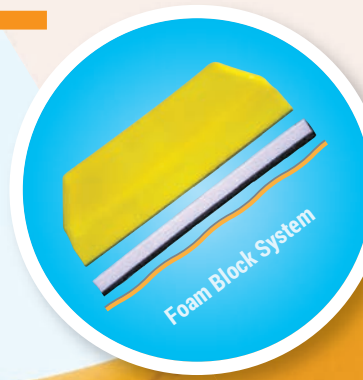
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# WELDING PROCESSES, PROTOCOLS, AND CERTIFICATION

A LOOK AT MAG, STRSW, WELD BONDING, MIG BRAZING, MIG ALUMINUM AND MORE FOR STEEL AND ALUMINUM

BY **LARRY MONTANEZ** | TECHNICAL ADVISOR

3mm plat to 3mm plat T weld.

Welding has become a hot topic as of late. After structural repair procedures, welding is one of the most improperly performed procedures in collision repair. This can be due to a wide range of issues within the repair facility. Sometimes the equipment is outdated, damaged or simply not even in the shop, other times technician skill and training is lacking. Most often, it tends to be a combination of the two.

Here we are going to discuss the different types of welding methods used for steel and aluminum and the equipment and certifications required. Welding has become a big topic due to the 2015 Ford F-150, which is primarily aluminum, driving discussions; and because of the introduction of some new advanced high-strength steels (AHSS). Many OEMs have had to redesign their tool and equipment requirements, along with their training programs, because of these new substrates or entirely make a new repair training program.

Most of the aluminum collision repair certification programs require specific structural repair equipment and tools, welding equipment and certification to be on their program.

## MAG (Metal Active Gas) welding steel

Only inert gases or gas mixtures are used for the shielding gas when MIG (Metal Inert Gas) welding. Typical inert gases used for MIG welding are argon and helium. These gases are usually used for MIG welding of aluminum and other non-ferrous metals.

MAG welding uses active gas mixtures that have been developed primarily for welding steels. Typical shielding gases are mixtures of argon, carbon dioxide and oxygen. Generally in collision repair the gas mixture is 75 percent Ar/25 percent CO<sub>2</sub>; 70 percent Ar/30 percent CO<sub>2</sub>; or 65 percent Ar/35 percent CO<sub>2</sub>.



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The composition of the shielding gas has a substantial effect on the stability of the arc, metal transfer and the amount of spatter. The shielding gas also affects the behavior of the weld pool, particularly its penetration and the mechanical properties of the welded joint. At one time MAG welding was the only way to weld panels together

in the collision repair field. Once Squeeze Type Resistance Spot Welders (STRSW) were developed for the collision industry, MAG was still preferred. But due to the development of AHSS and the heat affect on these metals, AHSS welding manufacturers were forced to produce more advanced STRSW. Although STRSW is the pre-

ferred method, MAG welding is still allowed by many OEMs for outer panel replacement.

**Squeeze Type Resistance Spot Welding (STRSW)**

STRSW is the preferred method for replacing outer panel structural components, as per most OEM replacement procedures. In some cases, the OEM requires STRSW for replacement of their components, providing the arms can reach both sides of the flange. Some manufacturers will allow STRSW on flanges and in areas accessible by the arms. Since no one allows single-sided welding, most OEMs will allow MAG plug welds and some limited OEMs require rivets in areas where there is no backside access. STRSW has advanced to meet AHSS needs and ensure a small heat affect zone (HAZ). To be current with the types of steel materials utilized in late-model vehicles, most of the STRSW equipment you should own should have been purchased within the past five years. STRSW is not used for aluminum repair.

**Weld bonding**

Weld bonding is the process of applying structural bonding adhesive between the flanges, then resistance welding the panels together. Currently many OEMs use this process at the factory, but in the aftermarket field only Ford

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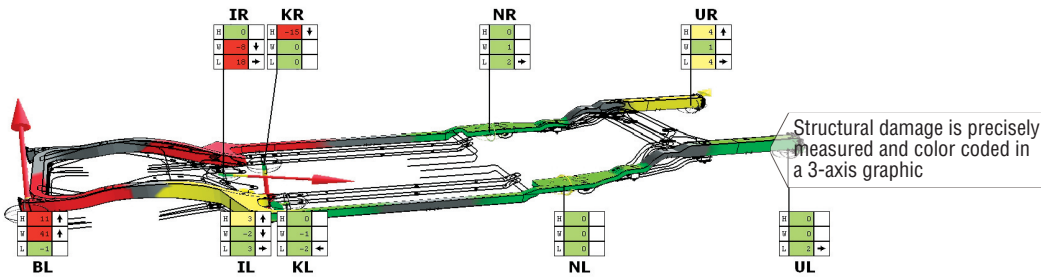
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and Chrysler (includes Dodge and Jeep) require the weld bonding process for replacement of their components. BMW uses weld bonding during the assembly of their vehicles, but for replacement of their weld-bonded panels they require rivet bonding. Modern STRSWs have specific settings for weld bonding. Just remember to shunt the first weld.

**MIG brazing**

MIG brazing (MIG-B) is welding performed with a gas metal arc welder, called gas metal arc welding/GMAW, with a silicone-bronze welding wire and 100 percent argon gas. MIG-B is gold in color, and is not a fusion weld. Sometimes referred to as silicone-bronze welding (SBW), MIG-B is not used in the assembly process — OEMs use the laser brazing process. Generally, you will find laser brazing on the roof to uni-side flanges and on some rear body panel flanges, but most OEMs require bonding for replacement of laser brazing. Toyota, Honda, VW and Mercedes-Benz are a few OEMs that have replacement procedures that require MIG brazing in the rocker and quarter panel sectioning areas. MIG brazing will likely become more of a required procedure as new advanced steels are introduced and require a lower HAZ.

**MIG aluminum**

Proper welding technique and cleanliness is crucial when welding aluminum. Techniques that are a little sloppy in steel welding will destroy an aluminum weld. You must weld like a machine, and porosity is a main area of concern when welding aluminum. When welding steel, you can use the push/forehand or pull/backhand technique, but with aluminum, you must use the push/forehand technique, as this will allow the weld site to be continuously protected by the shielding gas. Steel MAG welding uses a two-step trigger process, where you press the trigger (step 1) and the machine welds, and then you release the trigger (step 2) and the welding stops. When welding aluminum, a four-step trigger is the preferred method, and sometimes it is required. A four-step trigger process has a cold start at the beginning of the weld and the crater at the end of the weld. A four-step process works as follows:

Step 1 — Hot Start: Depress the

**THE VALUE OF WELDING TRAINING AND CERTIFICATION**

**BY I-CAR**

*Collision repair technicians today are finding themselves knee-deep in a “Technical Tsunami™” that is washing over the auto industry, making many conventional repair processes dangerously outdated. An estimated 142 new or redesigned vehicle models hitting the road in 2015 alone will introduce a wave of non-traditional structural materials requiring unfamiliar repair techniques.*

*Without training on the repair process for these innovative vehicles, which may substitute aluminum for steel or use new combinations of metals, technicians cannot be assured that they have the proper training to perform complete, safe and quality repairs. Anything less may compromise the performance of advanced materials structure, correlating to a car or truck that fails to protect occupants in a subsequent accident, which may lead to legal liability for repair facilities. This liability is increased by the lack of training in the industry: I-CAR® estimates that 76 percent of automotive technicians who weld — a critical repair process for today’s vehicles — have not achieved I-CAR’s industry-standard certification in basic steel welding. Furthermore, I-CAR estimates that 67 percent of the industry has no consistent training at all.*

*Welding is a skill for which updated and continued training is critical, and it goes beyond having an understanding of the pro-*

*cesses and equipment required. All I-CAR Welding Training & Certification™ courses, which cover a variety of materials and techniques, now include a thorough pre-course capability and readiness assessment to confirm that the facility’s infrastructure and equipment are prepared for the in-shop Welding Training & Certification course. This includes an on-site assessment to help shops and technicians get the most out of the training available. I-CAR works with 12 OEMs, including General Motors and Nissan Motor Co., to deliver expert welding training to its technicians.*

*Weld quality has a direct impact on structural integrity and safety. Insufficiently trained staff puts not only collision repair shop customers — and everyone else on the road — at risk, but also the individual shop, the technician who did the repair and the entire industry.*

*Welding certification and other training opportunities provide a competitive advantage, as well as properly prepare technicians for the flood of new vehicles entering the shop.*

*Founded in 1979, I-CAR is a not-for-profit education, knowledge and solutions organization designed to support the evolving needs of the Collision Repair Inter-Industry. I-CAR is focused on improving the quality, safety and efficiency of auto collision repair for the ultimate benefit of both the industry and the consumer. Visit [www.i-car.com](http://www.i-car.com) for more information.*

trigger and the welder starts at 150 percent of the weld current. For example, if you are set for 100 amps, the welder will increase the current to 150 amps. This Hot Start is generally only required for a second or two.

Step 2 — Welding Current: After one to two seconds release the trigger and the current drops back to the original setting. This step is where the majority of your welding is performed. Remember your finger is not on the trigger; the machine will be welding, however.

Step 3 — Crater Fill: As you get to the end of the weld, you will depress the trigger again and hold it depressed. The machine will slightly increase the gas and lower the current. This will do two things: clean the area and fill the

crater that will form due to the amount of heat. This step is generally only needed for two to three seconds.

Step 4 — Weld Stop: After two to three seconds, release the trigger and the weld current is cut off and the gas will stay on and flow for two to three seconds to cool the area.

Four-step trigger does take some practice to get used to it, but once you do it will become easy.

For aluminum welders without four-step trigger, you will perform a tail-in/tail-out procedure. Tail-in/tail-out is where you begin your cold start on the panel and push into the joint to allow the heat to build up, and then at the end tail-out or off the joint and back on to the panel to allow the crater not to be on the joint.



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Fillet 3mm chilled cast to 3mm chilled cast.

Another procedure to prevent cold starts/craters is to tack weld small pieces of the extra scrap aluminum to the flanges and start and finish your weld on those tabs. After your weld is complete, you can cut them off and dress the edges.

Aluminum welding is difficult but not impossible to learn and master; practice is paramount. Aluminum likes to be welded hot and fast, and many of the aluminum welds are long. Some weld flanges can be 300mm (12 inches) long. Unlike steel, there is no skip welding allowed; it starts on one side, then weld to the end. Technique is extremely important.

Technician skill, body position, hand position, gun angle, gun position and travel speed can all adversely affect the weld quality. Please keep in mind that the OEMs will require very specific machines and they can be very expensive. Aluminum MIG welders can range from \$3,500 up to \$20,000.



Fronius settings

### Welding certifications

This word “certification” has become a real catch phrase lately in the collision repair field. Each OEM with a collision repair program is using this term for their program and for their welding. Let’s look at some of the facts, and you can draw your own conclusions.

Many of the OEM collision repair programs require some I-CAR training as a starting point. Some OEMs have decided to have I-CAR assist in the development of a specific vehicle-training program, while others have their own facility and training program.

Most of the European OEMs require vehicle specific hands-on training classes at their own training facilities, while many of the U.S. OEMs require I-CAR classroom-type training.


All the OEM programs have certain fees attached to them, along with some specific equipment purchases, facility appearance and general insurance coverage.

Many of the OEM programs require the repair facilities to obtain the I-CAR welding series to be accepted to their specific welding certification. A number of the U.S. OEMs utilize I-CAR’s new welding certification program, which is where your technicians are tested at their facility with their equipment.

All welding test samples are visually inspected and destructively tested and then measured for tear out with an I-CAR welding gauge, in a shop

situation. The I-CAR test is a six- to eight-hour test and you know the results at the end of class. Recertification is required every five years.

Most of the European OEMs require the I-CAR aluminum-welding test and then they require their specific test. Most of the European OEMs have adopted the ISO 9606-2 Welding Certification for their aluminum programs. The ISO 9606-2 test is generally a 40-hour test taken over a one-week period at the OEM’s training facility.

Mercedes-Benz requires 80 hours taken over two weeks for the initial test. After performing multiple different weld configurations on cast and plate aluminum, all in the overhead position, the samples are sent to a lab for testing. Some OEMs send only some samples to the lab, while other samples will be tested in-house by an ISO/AWS welding inspector. Recertification is every two years, except for Mercedes-Benz, which is every six months. 



LARRY MONTANEZ  
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Montanez is co-owner of P&L Consultant, which works with collision shops on estimating, production and proper repair procedures. He is also a certified technician for multiple OEM collision repair programs.

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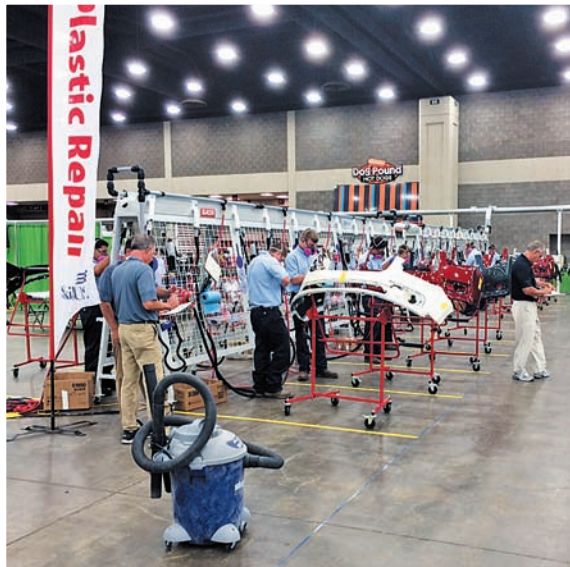
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(Left) Plastics; and (Right) Damaging the new parts for use for the competition

# VIP ACCESS

## A BEHIND-THE-SCENES VIEW OF THE SKILLSUSA NATIONAL COMPETITION

BY **BOB KEITH** | CONTRIBUTING EDITOR

Every year during the last week of June there is this little skilled trades competition. Actually, that little competition isn't so little; in fact it's huge! Unless you have attended a SkillsUSA National competition, it is very hard to describe the width and depth of the program.

SkillsUSA National Competition is totally dependent on a very large, very dedicated contingent of volunteers who work with great passion to design, create and facilitate the collision repair and refinish competition. Also, many companies donate equipment, volunteer time and materials to make it all happen.

The very future of the skilled trades in this country is in the hands of the fine men and women who compete every year. Over the past 11 years, I have had the honor of participating on the National Technical Committee for the Collision Repair Segment, with a focus on Structural Damage Analysis.

I thought I'd share with you the 4-6 days of behind-the-scenes preparation before the competition. The national competition was moved this year to Louisville, Ky., after being in Kansas City for several years. The move required a lot more preparation by the various committees. Because we had a whole new building, layout planning

included several live meetings, site visits and conference calls.

As a part of the Collision Repair Technology Committee, I will focus on that area in this article. But Collision Repair Technology (CRT) and Automotive Refinish Technology (ART) are a joint effort, and we all assist each other to make this the best competition possible.

### Day 1: Sunday before the competition

Many of us travel on Father's Day to be at the conference center first thing Monday morning. But because of the new venue and updated equipment, many of the volunteers arrived in



Contestants participating in Color theory



Contestants waiting to do a mock job interview

Louisville on the Friday before the contest this year, which was June 20-26.

### Day 2: Monday before the competition

Bright and early arrival at the conference center! We do all of the heavy set up for both competitions and today is a big day. Much of the heavy equipment, spray booth trailer, new dust extraction equipment, frame machines and equipment crates had already been set up for volunteers.

### Structural analysis

Unpack the crates of equipment; assemble the damage simulators and gauges. Prep the damaged vehicles and load them on the machines. Set up the electronic and universal measuring systems on the damaged vehicles. Volunteers then measure the vehicles to determine the damage that the competitors will need to identify.

### Welding

Unpack the crates and skids of equipment; assemble the welding tables and protective curtains. Lay out electrical cables and place the welders and fume extraction units along with testing the function of the equipment. Verify that all consumables (welding wire, welding gas and test coupons) are present and ready for testing.

### Sheet metal repair

This year the committee had to assemble new dust extraction equipment and saw horses. All machine and hand sanding would now be done on a dust extraction system. This was definitely a professional upgrade. All of the repair materials (abrasives, fillers, etc.) had to be unpacked and inventoried. New fenders are unwrapped. Fixtures are set up to place three types of damage consistently in each fender that the contestants will be judged on repairing.

### Plastics repair

As with sheet metal repair, plastics had all new racking and stands to hold the bumper covers that would be repaired. This committee was heavily involved in the set up of the total vacuum system. All sanding was on the new vacuum system. New bumper covers were "damaged" consistently so that all contestants had the same three testing points.



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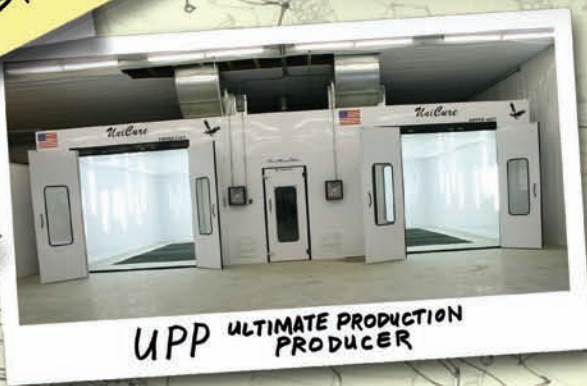
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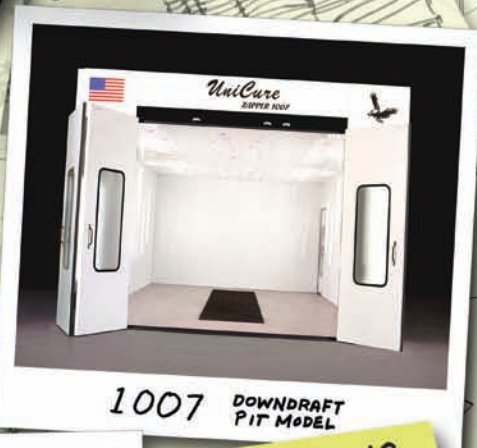
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All of the consumable products are unpacked and inventoried at all of the work stations.

**General testing areas**

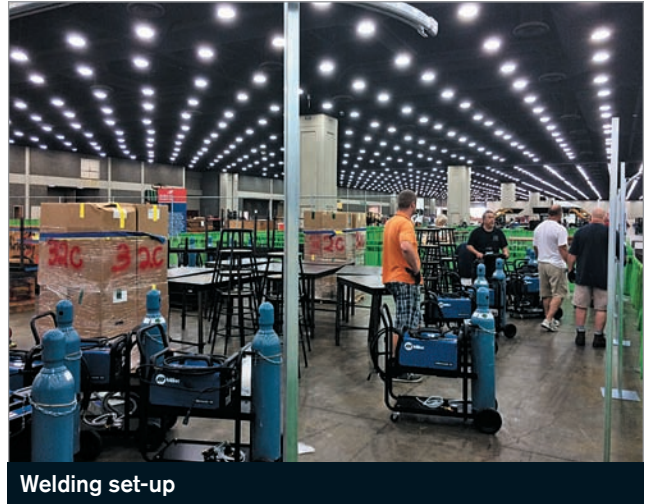
We also set up an area for the contestants to serve as both their home base and a written testing area. A separate area is then arranged with tables and chairs for the resume writing and submission. This year we set up portable cubicles instead of curtains for the interviewing portion of the competition.

**Day 3: Tuesday – The competition begins**

All of the various competitions are fine tuning their areas to make sure all is ready for the Thursday competition. In Structural Analysis, we are setting the damage in the simulators and cross checking all measurements on the two vehicles (one unibody and one body on frame) to make sure we all agree on what the judging expectations are. We are also completing final preparation on testing materials and getting the scoring grids set up. This afternoon will be the written testing.

After lunch, the contestants arrive and go through an indoctrination period which explains the competition process and rules. The written testing now begins. ART and CRT contestants take both an estimating test and an ASE test. CRT also takes a test on structural analysis and component identification.

After testing ends the competitors are excused and the committees dismantle the test area. This area now becomes the home base for the contestants.



Welding set-up

Auto Collision Repair by Senn's in Louisville hosted a BBQ dinner that night for the volunteers. It's great to relax with all of our committee friends.

**Day 4: Wednesday – The day before the "hands on" competition**

This is the one "easy" day for the committee volunteers. The competition is set and we are applying the final finishing touches. In Structural Analysis, we are grading written tests during this time. Competitors present their resumes

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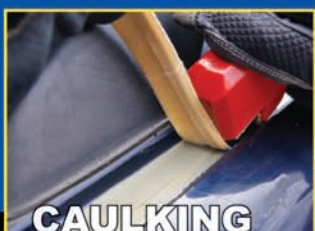
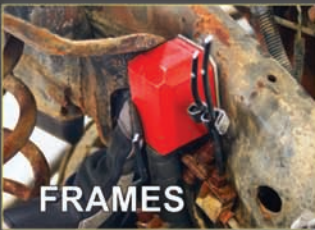
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and interview for a job position as a part of the competition. After lunch, the contestants are walked through every segment of the competition and given an overview of what is expected of them on Thursday. This is their only opportunity to ask questions about specific parts of the test or how equipment works.

Tonight is the committee and judges awards dinner. This year's dinner was especially poignant as we had several long-term members retire from the competition after many years of service.

**Day 5: Thursday — Competition day!**

We are all ready to make the competition happen. After a year's worth of preparation the competition starts. Contestants break into their assigned groups and move to the first station in their rotation. At this point the floor erupts with the crackling sound of MIG welders, grinders and sanders spinning up, the tink, tink, tink of hammer on dolly and instructions being shouted out. Each

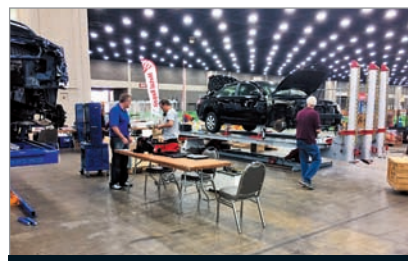
segment is 90 minutes long with a short break between and a lunch period.

All of the work done to prep and set up ends in eight short hours. The contestants are tired, yet relieved that they are done. They gave it their best as they are all champions!

At this point each committee addresses the competitors and their coaches for a debrief of the competition. We discuss where the strong points and the weak points in each segment were. We also announce expected changes to next year's competition.

By now it's around 5 p.m. and it's time to disassemble the competition. Everything has to come down then be packed up and crated up to go into storage for next year. When the dock doors open up the air conditioning is shut down (and it's June in Kentucky!) what takes four days to assemble comes down in four to five hours.

In Structural Analysis we disassemble the simulators and box them with the gauges. The measuring systems are carefully packed away and



Frame set-up


the vehicles are removed from the machines. The frame machines are then made ready for shipment.

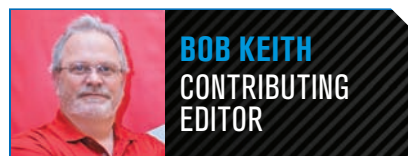
All of the segments are doing the same thing with tools and equipment being packed away. Welders are being prepared for shipping back to the manufacturer. Tables and racking are being disassembled and prepped for storage. The dust extraction system is taken apart and crated. The spray booth trailer exhaust system is disassembled and packed into the trailer. It's amazing to watch the team at work helping each other get this done as quickly as possible.

We have one last dinner with friends and colleagues to celebrate another fantastic year at SkillsUSA!

**Final thoughts**

What has always impressed me is volunteers from all different segments of the industry (body shops/insurers/manufacturers/suppliers) take off their stripes for this competition. We stop being competitors for one week a year to help celebrate the skilled trades and what they mean to this country. I am truly honored to say that I have been a part of this over the past 11 years. I will continue to participate as long as they will have me.

If I have inspired you to get involved, that's great! Every state has a SkillsUSA committee and competition. The national level can also use more volunteers. For more information on SkillsUSA, check it out at [www.skillsusa.org](http://www.skillsusa.org). Get involved. You will be happy you did. 



**BOB KEITH**  
CONTRIBUTING  
EDITOR

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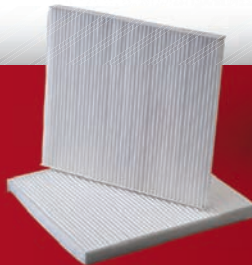


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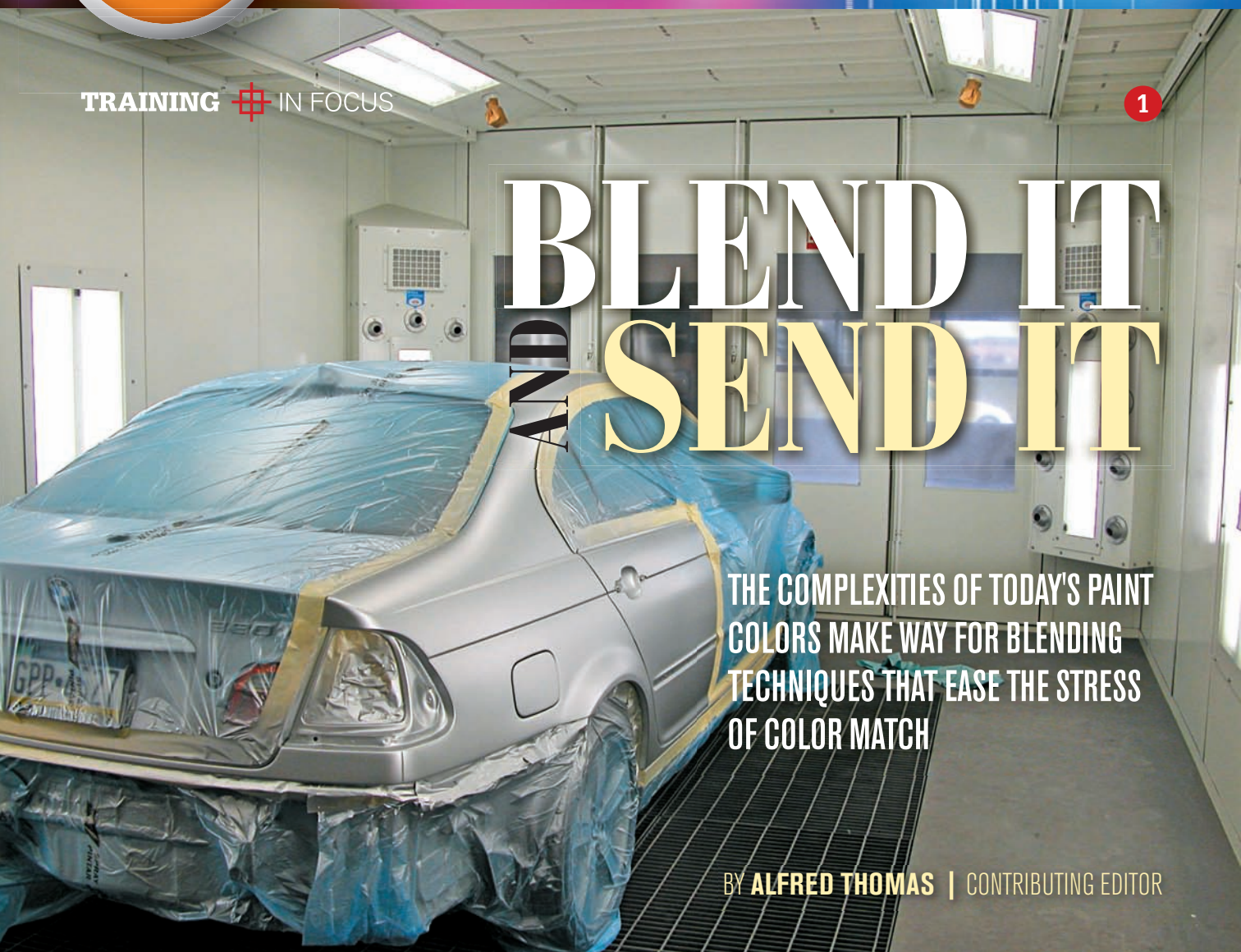
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# BLEND IT AND SEND IT

THE COMPLEXITIES OF TODAY'S PAINT COLORS MAKE WAY FOR BLENDING TECHNIQUES THAT EASE THE STRESS OF COLOR MATCH

BY ALFRED THOMAS | CONTRIBUTING EDITOR

In the paint department, refinishing a panel — or refinishing a panel that has a repair in an adjacent panel — is one of the most common paint procedures performed. With today's highly complex colors having metallics, pearls and combinations of color enhancements, the technician's job of matching colors has become very difficult. To meet this challenge, several paint techniques have been developed to blend the new color (**FIG 1**) into the old color. If the match is slightly less than perfect, the eye is tricked into not seeing the subtle changes. In fact,

many paint companies recommend that all repairs be blended to speed productivity. Although some painters still panel paint colors to ensure color will match, "blend it and send it" has become the standard.

### Color match issues

Though manufacturers standardize all their color formulas, not every factory-painted car precisely matches that color standard. If a color is applied at multiple manufacturing locations, each location may have a slightly differing color tone. Though paint companies

try very hard to identify and correct their formulas for that variance, it is not always exact. Many paint manufacturers provide variance decks to help match the more common color variations, which has become very helpful. By comparing the variable formulas to the vehicle's color, a "blendable match" can often be found.

There are also many other possibilities that may cause the color to be off. For example, over- or under-pouring when mixing the formula, poor spray gun adjustment or improper spray technique, improper reduction, even mixing to the

incorrect formula, or a corrupt toner deck can all cause mismatch.

If the painter is familiar with and confident that the color that is being applied is one that will match the paint, then mixing and blending the color with the fastest blending technique (such as the standard blending technique) will usually produce a satisfactory match. (More on blending techniques later.) However, if the color is a difficult one or one that the painter has had trouble with in the past, the best method to tell if the color will be a blendable match is to make a spray-out panel. By spraying a panel with the color that is to be applied to the vehicle, then comparing it to the vehicle, the painter can determine whether the color is blendable or not.

### Clean, clean clean

Huh, you say? You are correct: cleaning the vehicle has nothing to do with the color match of a blend. But it can be very frustrating to put in all the time and consideration on the vehicle's color and blend technique and then notice multiple dirt nibs that must be corrected before delivery.

Here are some quick tips on paint job cleaning. Clean the booth before each paint job; blow down the wall with the fans on before the vehicle is loaded. Mask as much of the vehicle as

possible outside the booth, then blow the vehicle off and load it into the booth. Once in, finish any masking such as final bagging. Next, chemically clean according to the type of paint system that is been used. Once the vehicle is in the booth, the fan should be on and the doors closed. At this point access to the booth should be limited and the doors only opened when necessary. Also, the booth should be balanced to a slightly positive air flow (**FIG 2**) so if the door must be opened, dust will be blown out and not sucked in.

Next, tack off the area to be painted with a new tack cloth, and then with a second one. Tack off the masking paper surrounding the paint area, and just before painting the vehicle, tack the air hose off so random dust that it may have picked up will not drop into the paint.

All these precautions that can be taken prior to applying the blend will pay off in less detailing or even avoiding a repair that may otherwise be needed just because of dirt.

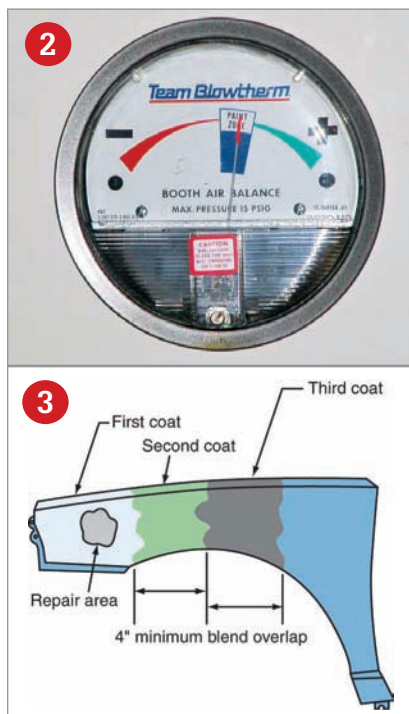
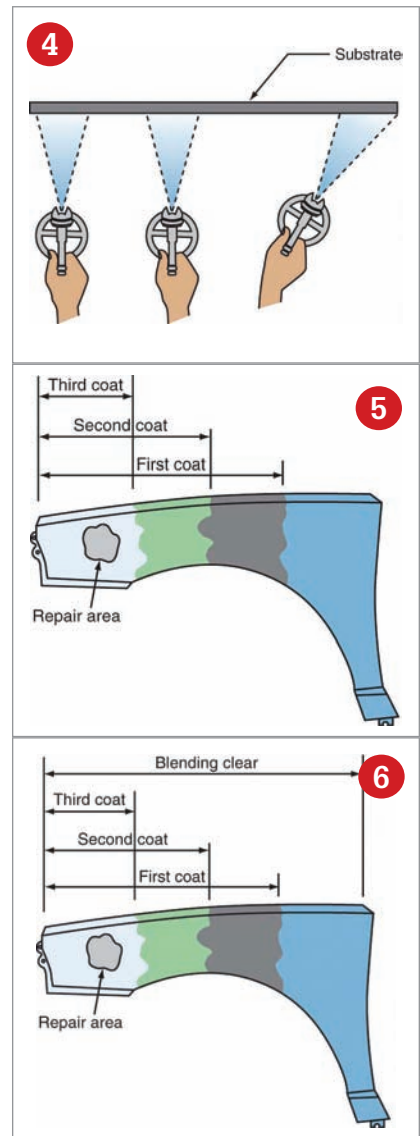
### Blending techniques

While I am sure there are many variations on the three types of blending that will be discussed here, I'll review these techniques that are most often used: standard blending, reverse blending and wet-bed blending.

#### Standard blending

As paint colors became more sophisticated and thus the problem of mismatched colors when panel blending was used worsened, painters decided to extend the new paint into the old color. Multiple coats were used (3 to 4) with the first coat, which was extended 4 to 6 inches into the old panel. The next coat was extended 4 to 6 inches beyond that, and the third also extended beyond the second (**FIG 3**). After the repair and blend area is sprayed to full coverage, it is best to use a color-corrected light to check that all areas are fully covered, especially tricky areas such as fender edges and recessed areas that may not have been sprayed directly.

The painter should also consider the areas where the blend ends, especially on the final coat. (This goes for all the spray techniques.) If the blend is ended abruptly in a straight up and down line, it is more likely to be seen; so if the



blend is instead staggered or done at an angle, the blend's end point is less likely to be noticed. The car's design, or where shadows naturally fall, can be used to the blend's advantage. Ending the blend in a staggered line under where the side mirror normally casts a shadow also helps hide a blend.

#### Gun technique and the blend

Though gun technique is important in all painting, the blend has some of its own challenges, not the least of which is overlap. For years, a 50 percent overlap was sufficient to cover without streaking the paint; but as highly metallic colors became even more popular, painters found that a fuller coverage was needed and most paint manufacturers and paint gun makers now sug-

gest a 75 percent overlap is better. Also, it was found that many painters tended to fan the gun (**FIG 4**) at the end of the blend. Unfortunately, this would cause the metallics to orient incorrectly and cause a visible line, sometimes referred to as a "halo." To combat the poor orientation, it is better to keep the gun perpendicular to the paint surface and

off-trigger the gun. This can be a bit tricky at first, but with practice the skill of slowly letting the trigger off prevents the problem. The metallics orient correctly because the distance to the surface is correct.

**Reverse blending**

The reverse blend was developed to

combat the problems listed above. As colors such as silver, gold and bronze, for examples, became even more difficult to spray, the reverse blend was developed.

Though the reverse blend overlaps each coat by about 4 inches, the same as the standard blend, the difference is that the first coat is the one that extends the farthest: 12 to 14 inches into the adjacent panel. The second coat is blended four inches less, and the third yet four inches less than the second (**FIG 5**). The same techniques as the staggered blend line, 75 percent overlap, and off-triggering should be used with this technique.

To combat problems such as halo, visible blend line and poor metallic orientation, paint manufacturers developed products often referred to as the orientation coat. One of the problems that occurred with highly metallic colors, such as silver, is that the metallic flake would gather in even small scratches left when prepping the panel to be blended. These metallic streaks could not be corrected with detailing, and would need to be re-sprayed.

A clear orientation coating was developed that could be sprayed onto the panel being blended to keep metallics from gathering; painters found that halos were also reduced with an orientation coat. Thus the wet-bed blending technique was developed.

**Wet-bed blending**

To use the wet-bed blending technique, the painter sprays a full wet coat of orientation, or wet bed, over the entire panel to be blended. Then the color is applied using the reverse method (**FIG 6**). This technique allows the color to be sprayed onto a tacky surface where any small scratches have been filled with the orientation coat, and the metallic will orient correctly. Halos, though not always eliminated, are markedly reduced. 



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**PPG'S 'BEST USE OF COLOR'**

PPG Automotive Refinish presented its popular "Best Use of Color" awards to three spectacular customized cars at the NSRA's 46th annual Street Rod Nationals Plus. The event was held Aug. 6-9 in Louisville at the Kentucky Exposition Center.

The three cars, each sporting a uniquely distinctive paint job, were a 1934 Chevy (right) built by Mark Giambalvo, owner of Creative Rod & Kustom in Womelsdorf, Pa., a 1931 Ford Model A (below) from Dave Tucci at Tucci Hot Rods, Marcy, N.Y., and a 1965 Mustang convertible (bottom) out of Dustin Foust's Classic Restorations of Southern Indiana LLC in Floyd's Knobs, Ind.



The '34 Chevy is owned by Jack Maloney of Highland, Md. Giambalvo called on his paint technician Jason Dunkelberger to give the car its rich and deep two-tone burgundy and black finish. Dunkelberger applied a variety of PPG DELTRON® products including DPS3055 V-PRIME™ Acrylic Urethane Surfacer, DBC9700 2000 Black Basecoat, DBC 2000 Basecoat, Gamet Red (code 926174) and CONCEPT® 2021 Urethane Clear to produce the standout look.



Dave Tucci's winning entry started out as a stock 1931 Ford Model A two-door sedan. Tucci rebuilt it as a street rod for

owner Dean Lombardo of Bronxville, N.Y. Then John Ramsey of John's Auto Restoration in Rome, N.Y., turned to Deltron and used DBC 2000 Basecoat, Tigereye (code 911865) and DC4000 Velocity Premium Clearcoat flattened with ONECHOICE® SU4985 Universal Matting Agent to produce the dramatic flat brownish finish.



Todd and Stephanie Foust, of Baton Rouge, La., entrusted their Mustang, "Black Diamond," to cousin Dustin Foust for customizing. Once Dustin remade the Mustang, his team went to work on the finish. They chose the Deltron line's DPX171 Non-Chrome Self Etching Primer, K38 High Build Primer Surfacer, DCC9300 Concept Acrylic Urethane single stage gloss black with no clear. The accent color (center of hood, tail light panel, etc.) is DBC Tuxedo Black (code 918644) with DCU 2060 FLEXED "N" FLAT™ Clear.

An estimated 70,000 enthusiasts attended the four-day event. The PPG award-winning cars were part of a field of more than 11,000 entries comprising street rods, classics, custom cars and trucks manufactured no later than 1985. While the judges faced a daunting task in evaluating so many cars, the quality of the winners' paint jobs noticeably stood out.

The NSRA's Street Rod Nationals Plus is the world's largest automotive participant event and is complemented with ten NSRA divisional nationals. NSRA gatherings are a combination of games, activities, exhibits and shopping opportunities with everything geared to family entertainment. PPG has a long-term association with the NSRA.




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# THE OTHER SIDE OF PLASTIC REPAIR

## FIX PLASTICS WITHOUT NITROGEN

Use either a teardrop cutter bit or tapered burr to make a v-groove on the repair.

BY **TIM SRAMCIK** | CONTRIBUTING EDITOR

When *ABRN* last talked with some of its most recent Top Shops winners, several mentioned they were introducing nitrogen welding gradually. They were giving their techs the opportunity to examine the technology before fully implementing it into their operations. Considering there is a slight learning curve and that nitrogen welding promises to offer a number of repair solutions that ordinarily might involve a new replacement part, this is the smart, expected strategy. Once these shops become comfortable with the technology, others are sure to follow. Indeed, that's always been the path for most new repair techniques in the collision industry.

For now, shops can turn to a number of other plastic repairs that can be conducted with airless welders and other tools they should already possess. Refer to the following instructions, provided by the Urethane Supply Company, to handle some of your most common plastic repairs.

### Proper preparation

Virtually all collision repair tasks begin with cleaning the vehicle or part surface. Nowhere is this more important than plastic work, where the strength of the repair relies on a clean start.

**Step 1:** Begin by cleaning both sides of the repair area with hot water and soap designed for cleaning plastic.

**Step 2:** Dry with compressed air or a clean shop cloth.

**Step 3:** Hard-to-remove contaminants such as wax or tar may still remain on the plastic. Thoroughly clean the area again with dedicated plastic cleaner.

**Step 4:** Using a clean, lint-free cloth, wipe the cleaner off while it is still wet. Be certain to wipe in one direction to avoid spreading any contaminants back over the clean area.

Examine the plastic for any sign of distortion. If there is, reshape the distortion with these steps:

**Step 1:** Heat the distortion with a heat gun. Note that the plastic must be heated all the way through.

**Step 2:** Maintain the heat gun on the area until the opposite side of the plastic is uncomfortable to the touch.

**Step 3:** Use a screwdriver handle or other blunt tool to force the plastic back into position.

**Step 4:** Use a damp cloth to cool the area. Stretched areas will shrink once the bumper cools.

**Step 5:** Once the distortion is reshaped and smooth, check your work by sanding it with 80 grit paper, which will help you identify any remaining low spots.

**Step 6:** Repeat the heating, reforming and cooling process to push out any remaining low spots.

Note that this process can be replaced with another for certain plastics. Thermoset polyurethanes (PUR and RIM) possess a “memory” characteristic that sometimes will allow them to return to their original position if they are held under a heat lamp or in a heated spray booth.

Any cuts or tears in the plastic also must be prepped. Use aluminum body tape on the back of the repair area to

align the cosmetic surface. Aligning the outer surface helps minimize the amount of filler required to restore the exact profile of the part.

### Repairing automotive urethanes

Repairers need to be cautious when working on plastic parts, particularly bumper covers, constructed of automotive urethane (also called PUR). Automotive urethanes are "thermoset" materials, which means they're created by combining two liquid chemicals to form a solid. If these urethanes are ever heated, they break down and will not adhere to any repair materials. Technicians therefore can never melt these plastics with a hot air welder.

Shops typically can identify these plastics using identification markings on parts or the manufacturer's documentations. If those aren't available, a technician can test the part using a welder. This is done by first selecting a small area on the back of the part away from the repair. Press a hot welding tip into the area.

If the plastic is an automotive urethane, it will liquefy, bubble and smoke. Also, after it cools, the plastic remains tacky or gummy.

Although these plastics are extremely heat sensitive, they still can be easily repaired using an airless plastic welder. Note that the repair techniques for these plastics more closely resemble brazing rather than a true fusion weld. Use the following steps for performing repairs on parts fabricated from automotive urethanes:

**Step 1:** V-groove the damaged area (which should already be lined up using aluminum body tape or clamps). Using either a teardrop cutter bit or tapered burr, make the v-groove halfway through the back side of the part.

**Step 2:** Sand the v-groove with 80 grit or coarser paper to put a "tooth" into the plastic.

**Step 3:** Sand away the paint in the area surrounding the v-groove and radius the edges of the v-groove for extra strength.

**Step 4:** Set the temperature setting of the airless plastic welder to "clear" and place the appropriate welding rod in the welder.

**Step 5:** Holding the welder's tip slightly away from the surface of the plastic, melt the rod into the v-groove.

The rod should come out of the bottom of the welder's shoe completely melted and clear, never bubbling or discolored. Turn the welder up or down as needed to produce the desired result.

Do not overheat the base material. Simply melt the rod onto the surface.

Also, lay down no more than 2 in. of welding rod into the v-groove at a time. Remove the rod from the welder tip, and before the melted rod has time to cool down, go back over it with the hot welder tip and smooth out the well. You can touch the bumper with the welding tip, but keep the tip moving so you don't overheat the base material.

**Step 6:** After the weld on the back side cools, repeat the v-groove and welding process on the cosmetic side. Be sure to create a v-groove deep enough to penetrate the welding rod on the back side.

**Step 7:** Using coarse sandpaper, sand the weld to a smooth contour.

**Step 8:** Since the urethane welding rod will not feather very well, cover it with an appropriate epoxy filler to re-finish completely. Sand the weld slightly below flush so that filler can cover the welded area completely.

### Repairing torn bolt holes

An airless welder also can repair torn bolt holes in plastic.

**Step 1:** Use a sanding disc to taper the plastic around the hole down to a point on both sides.

**Step 2:** Use aluminum body tape to create a bridge across the torn mounting hole.

**Step 3:** Melt a urethane welding rod into the area.

**Step 4:** When finished, drill out the new hole.

### Padded dash repair

Padded dashes are common repair areas since they are often damaged in front-end collisions and can crack or break due to exposure to extreme temperatures. Use the following repair instructions:

**Step 1:** Bevel the edges of the area to be welded with a drum sander on an electric die grinder. Open up a cavity at least ¼ in. deep in the foam backing and vinyl cover.

**Step 2:** Sand and bevel the vinyl cover around the cavity to allow for featheredging of filler.

**Step 3:** Using an appropriate size

welding rod and an airless welder, start the weld at the bottom of the cavity. Fill the cavity with melted plastic and spread it out so that it overlaps the edges of the vinyl cover by about ¼ in.

**Step 4:** After allowing the weld area to cool, grind the area smooth with a drum sander. Rough up the surrounding area to improve filler adhesion.

**Step 5:** Mix the padded dash filler and apply with plastic squeegee. Cover an area larger than the weld in order to feather out the repair to a smooth contour.

**Step 6:** Allow the filler to cure for at least 15 minutes, then sand to a smooth contour. Finish sanding the filler with 220 grit paper.


**Step 7:** The dash will need to be re-textured. Begin by cleaning the area with soap and water. Dry with a clean cloth. Apply a plastic cleaner and wipe dry with a clean cloth.

**Step 8:** Sand with 180-240 grit sand paper to remove any gloss. Blow the area dust free with clean, dry air.

**Step 9:** Apply a texture product according to the manufacturer's instructions. The instructions should include a "texturing reference" guide to allow you to match the product to the dash texture.

**Note:** Do not try to spot retexture. Retexture and blend the leading edge or most visible area of the dash pad all the way across. If there is a noticeable difference in texture, retexture the entire pad.


**Step 10:** Finish by applying a plastic topcoat. In some cases, a lacquer compatible top coat system will be necessary.

One final note: patience is a virtue when working with plastics. These repairs aren't time or labor intensive but need to be performed with a high degree of care if they are to meet your quality standards. 



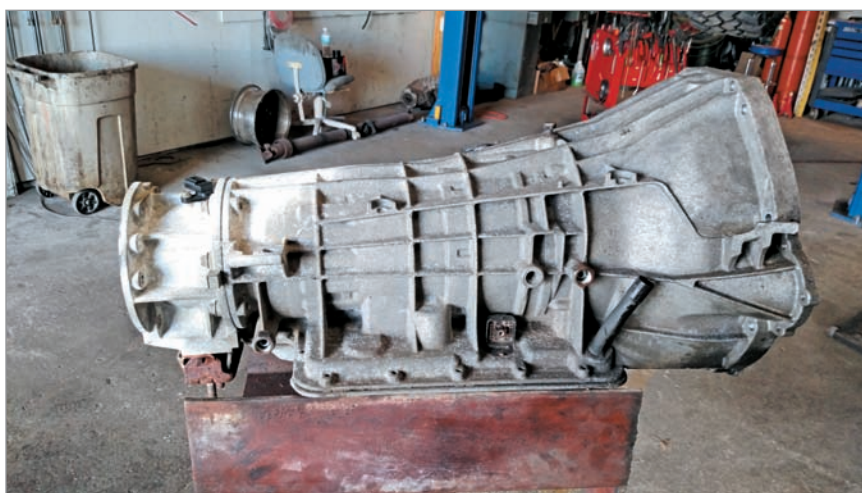
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CONTRIBUTING  
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Tim Sramcik has written for *ABRN*, *Motor Age* and *Aftermarket Business World* for more than a decade. He has produced numerous news, technical and feature articles covering every 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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# Identifying drivetrain components: Part III

## Understanding all-wheel drive and four-wheel drive and what to look for following a collision



Typical 4WD transmission will have a flat rear surface so that a transfer case can be bolted to it. This one is out of a 2006 Ford F-250 pickup truck.

BY **PETE RUDLOFF** | CONTRIBUTING EDITOR

**WHEN AN** automobile is involved in a collision, it is important to not overlook damage to drivetrain components that are attributed to the collision. Not only is it in the best interest of the vehicle owner to get their vehicle made whole, a collision shop opens up a whole new revenue source when they perform repairs beyond the sheet metal.

This month we will cover typical all-wheel drive (AWD)/four-wheel drive (4WD) components and what to look for when assessing a vehicle post collision. Though there are practical differences between AWD and 4WD, you will find that for collision purposes they are fairly interchangeable. The important difference to note between the two types is that AWD is designed to run at highway speeds on clean and clear

roads and 4WD is designed for high slip and off-road use and typically has a two wheel drive (2WD) or AWD mode that can be selected for highway use. Depending on configuration, when in 2WD mode either the front or rear axle could be the drive axle.

AWD/4WD systems can be found on cars, vans, mini vans, SUVs and trucks and will borrow components from either FWD or RWD powertrain plus integrate a few things unique to AWD/4WD.

### Automatic transmission

When inspecting the exterior case of a transmission, pay special attention to any impacts and look for cracks. Automatic transmissions typically utilize aluminum housings and aluminum tends to crack and/or break when impacted. One of the reasons engineers

use aluminum is because it is quite rigid and will retain its form under normal use. Unfortunately, this rigidity becomes a detriment during a collision. While this is bad for the crashed car, it is good for those of us doing the inspecting, as generally aluminum damage stands out quite well.

### Manual transmission

4WD manual transmissions will come in two case types, aluminum and cast iron. Both are quite rugged, but both can be damaged in a collision.

### Bell housing

The bell housing is the section that bolts to the engine. This is a common spot for fracture, as the material can be pretty thin in spots. Any signs of cracking or fractures should be a flag that the transmission will need to be removed and inspected more carefully. Either the entire transmission will need to be replaced or, for the more technically savvy, the damaged housing can be replaced. When inspecting the bell housing do not forget to look at the engine too. Many cars utilize an aluminum block engine and if a transmission is damaged, often the engine will suffer damage as well.

### Transmission case

Cracks in the automatic transmission case often result in leaks because you have an internal pump pressurizing passages inside the case. A crashed car spewing out transmission fluid could be an indicator that the main housing of the transaxle may be fractured. Usually just cleaning off the fluids and having a helper start the car and cycle through the gears is sufficient to nail down the source.

Manual transmission cases generally won't spew fluid running so you may have to drive and re-inspect for leaks.

**Transmission coolers**

Like case sections, damaged transmission coolers tend to leak badly when the engine is running. Keep in mind transmission coolers are exclusive to automatic type transmissions. Generally, if equipped with a cooler, it will be located in front of the radiator, integrated into the radiator or both.

**Transfer case**

AWD/4WD systems utilize a transfer case. This splits the power from the transmission and sends it to the front and rear differential. These can use a cast iron case, but aluminum is much more common and all the same rules for the transmission case inspection apply.

The cases are available in single speed, typically found in AWD only, and multiple speed versions that allow for true 4WD and a gear-reducing low range.

**Tail shaft**

The tail shaft of a transfer case is where the drive shaft connects to the transfer case output shaft. You will generally find two types of connections: slip yoke or a fixed yoke. To identify the two, look for bolts that hold the drive shaft to a flange on the output shaft. This would be a fixed yoke. A slip yoke is generally bolted to the differential pinion flange and then either bolted to the output shaft or free floats on it.

**Driveshaft**

The driveshaft connects the output shaft of the transfer case to the rear



A typical 4WD transfer case bolts to the back of a transmission and splits power to the front and rear axles as commanded.

differential and in some configurations to the front differential. Constructed of aluminum or steel, if it is impacted, it is no longer fit for service. Some drive shafts can be sent out and repaired, including getting them rebalanced. Most drive shafts have a means to extend and retract, either by utilizing a slip yoke on the transmission output shaft or a slip yoke built into the shaft itself. This allows for suspension compression and extension.

During significant collisions that push the differential into the driveshaft, inspect the slip yoke section of the shaft. If the slip portion has bottomed out, the transmission output shaft should be measured with a dial indicator. If bent, the output shaft should also be replaced.

**Differential**

The differential is used to convert the power coming from the transmission and split it to both drive tires. For AWD/4WD vehicles, you will find two types of rear differentials and three types of front differential.

- Solid axle units that travel up and down as terrain changes;
- Independent suspension-based differentials that keep the differential fixed in one place and allow the axle shafts to move with suspension movement;
- Some AWD vehicles utilize a FWD-type transaxle that houses the front differential in the same fashion as a typical FWD transmission.

Like a manual transmission, the differential is something that may need to be driven and double checked post repair. On top of physical damage externally, differentials can be broken internally during a collision. When performing quality control checks post repair, make sure to pay attention to any odd noises or vibrations.

In the case of solid front axles, you will find some steering components affixed to the housing. Inspect carefully for damage. A four wheel alignment is a good way to assess if a solid axle (front or rear) is bent.

**C/V axle shafts**

Some AWD/4WD vehicles have 2 or 4 Constant Velocity (C.V.) axle shafts that deliver power from the differential to the wheels. These are a very common component broken during a


collision. They are comprised of three major components: shaft, joint (2) and boot (also 2). Shafts and joints break and boots tear. Any damage to these components should be remedied by replacing the respective assemblies.

**Electrical**


You won't find a modern car that doesn't have some sort of wire or sensor going to it. Many automatic transmissions even have Electronic Control Modules (ECMs) and/or solenoid packs mounted externally to the case. Damage to ECMs, solenoid pack or sensors warrant replacement. Damaged wire harnesses should be assessed for either reconstructing or replacing depending on your shop's skill level. Do not reuse cracked or smashed electrical connectors and remember that ECM and solenoid pack replacement may require special manufacturer-specific scan tool procedures and/or programming to get them operational.

**Fluids**

Often overlooked, it is important as a service professional to make sure you are putting the correct Automatic Transmission Fluid (ATF) in when you are topping up after a repair. Red is not an indication of transmission fluid type, and failure to use the OEM spec fluid could cause shifting concerns or, even worse, a premature failure. Universal transmission fluids often do not meet the OEM spec. Use your service information to ensure you are ordering the correct ATF.

Taking the time to identify powertrain concerns while doing your post collision damage assessment adds a higher level of service for your customer and will bring a lot of money to your bottom line in broken components. Failing to take the time to verify the condition of powertrain components is doing your clients a huge disservice! 



Pete is a technician, instructor, technical writer and co-owner of Pete's Garage Inc. in Newark, Del., which is a friend to the general repair auto shops. He created the Delaware Training Group to bring techs together for education.  
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## THE LAST DETAIL [✓]

In recent columns, I've been laying out what I believe you need to do to position your business to thrive – not just survive – in the collision repair industry. We've started with the sales and marketing aspect of that. A key part of marketing is monitoring and improving your shop's online presence, which includes regularly thinking about what you put online – and checking what others are saying about your business online.

I recommend starting by first ensuring your business listing is current and consistent across all the search engines, mapping apps and other online tools that customers might use to locate you.

There's a service called "PowerListings" offered by Yext ([www.yext.com](http://www.yext.com)) that can help you verify and "claim" your business listing across 50 sites, including Bing, Yelp, Mapquest and Yahoo. This service may help you find, for example, that in some places you are listed as "ABC Body & Paint," while in others you're listed as "ABC Body and Paint" or "ABC Body Shop, Inc.," etc. These inconsistencies can lead search engines to "penalize" you in the listing rankings because they may presume you're trying to "game" the system.

Yext also offers an option (for an annual fee) of monitoring and maintaining those listings to ensure they're always current. (I often recommended that shop clients contact Mark Claypool at Optima Automotive for help with their online presence. I know Mark can get you a significant discount on Yext's annual monitoring fee.)

Similarly, if you're a CCC ONE user, you have access to Carwise, which can help customers locate your shop or get electronic vehicle status updates. I often find that CCC ONE users haven't updated their Carwise listing with their company logo, hours of operation, photos of their business, etc.

Next, if you're using a customer satisfaction indexing service, check with that company about linking your CSI scores and customer comments to your company's Facebook page or website. That can be a great way to leverage the positive reviews you're getting.

Most shops have had the experience of finding a negative customer review posted on Yelp or somewhere online. I recommend three ways to deal with this.

First, make sure your CSI provider notifies you right away of any negative customer comments. That gives you an opportunity to try to fix things with the customer before he or she posts a negative review online.

Second, always do what you can to encourage your satisfied customers to post a positive review online. Lots of these good

## MORE ON MARKETING

### Monitoring and improving your shop's online presence are key to thriving in today's market

reviews will reduce the impact of the occasional less-than-positive review.

Third, respond quickly to any negative review. Don't be angry or defensive in your response, but also don't admit fault. Apologize that you didn't meet their expectations, and ask them to contact you to discuss it further to resolve the situation. This will demonstrate to others that you care about your customers.

Facebook can be another part of your online presence, but it needs to be done well to be effective. First, you need to post regularly. I recommend two or three times a week. The content of your posts is as important as the frequency. Post content that consumers will find interesting or helpful and are likely to share. Too often I see shops only posting photos of cars they've repaired or information that's important to our industry but not really of interest to consumers.

Instead, post things like tips on how to remove brake dust when washing your vehicle, or how to touch up a paint chip. Share a unique campaign about not texting while driving. The Traffic Safety Marketing website ([www.trafficsafetymarketing.gov](http://www.trafficsafetymarketing.gov)) operated by the National Highway Traffic Safety Administration regularly offers such campaigns you can post to your Facebook page.

Monitoring your online presence should also include checking out your competitor's online presence as well. Look at their websites and Facebook pages. See if they're offering more extended hours than you are, for example, or offering other information or services online that you aren't.

None of this can be a one-time or occasional thing. The shops that I believe are going to thrive moving forward are those that make time to monitor and improve their online presence regularly – as often as every week.

In my next column, I'll talk more about using CSI to position your business to thrive. 📧

“Post content that consumers will find interesting or helpful and are likely to share.”

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