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ADVANCED MATERIALS

**MARK A. BONO PRESENTS** “Your first aluminum estimate — are you ready?” at the PPG MVP Conference in Scottsdale, Ariz.

## PREPARE FOR YOUR SHOP'S ALUMINUM REPAIR INVESTMENT

**CHELSEA FREY //**  
Senior Associate Editor

➔ Mark A. Bono, current I-CAR instructor and Business Development Manager for Adrian's Collision Centers and a former shop owner, presented a session titled “Your first aluminum estimate — are you ready?” for a roomful of shop owners at the PPG MVP Conference, which took place April 24-26 in Scottsdale, Ariz.

Bono's presentation focused on the multifaceted nature of aluminum repair that shop owners must take into consideration when planning for future aluminum repair work. Addressing over 60 attendees in the breakout session, Bono opened the presentation stating, “The goal is to talk about this new precipice that we're at in the body shop industry. At some point you're going to have to fix aluminum vehicles, and you have already made or will make a substantial investment in alumi-

num-specific equipment.”

While special tools, equipment, training and shop space dedicated solely to aluminum repair might be the first things that come to a shop owner's mind when considering investing to prepare his or her shop for aluminum-intensive vehicles, Bono stressed that understanding the material and its repairability is essential to grasping the full breadth of the investment. For example, Bono explained that due to the fact that aluminum work hardens faster than steel, it takes more effort, skill and time — due to additional procedural steps — to move aluminum than it does to move steel.

More importantly, shop owners need to be able to share knowledge of aluminum's unique qualities with insurers. Bono explained, “You need to be an expert so you can have an informed conversation with insurers so they know what repairing aluminum takes and costs. You need to be

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**BREAKING NEWS**

3D PARTS

## 3D-PRINTED PARTS: COMING FOR PLANES; ARE CARS NEXT?

➔ In April, Alcoa announced that it would supply 3D-printed titanium fuselage and engine pylon components to aircraft manufacturer Airbus for use in commercial airplanes. While there have been some interior aircraft components created via 3D printing (also referred to as additive manufacturing), the use of printed metal parts in the engine and other areas of a plane is a relatively new development. Alcoa has invested heavily in 3D printing and metallic powder production capabilities at its technical center in Pittsburgh, Pa., and in 2015 the company acquired RTI International Metals (now known as Alcoa Titanium & Engineered Products, ATEP), which expanded its printed metal parts capabilities.

While an Alcoa spokesperson indicated that the company is targeting its additive manufacturing capabilities exclusively for aerospace applications right now, automotive manufacturers are also eyeing the technology. 3D printing allows manufacturers to create highly complex geometries that are often much lighter in weight thanks to some of the design flexibility enabled by printing. For example, a part can be constructed with a “honeycombed” interior that provides comparable durability

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## RECALLS

# ENHANCE CUSTOMER RELATIONS BY ENCOURAGING RECALL REPAIRS

**JAMES E. GUYETTE //**  
Contributing Editor

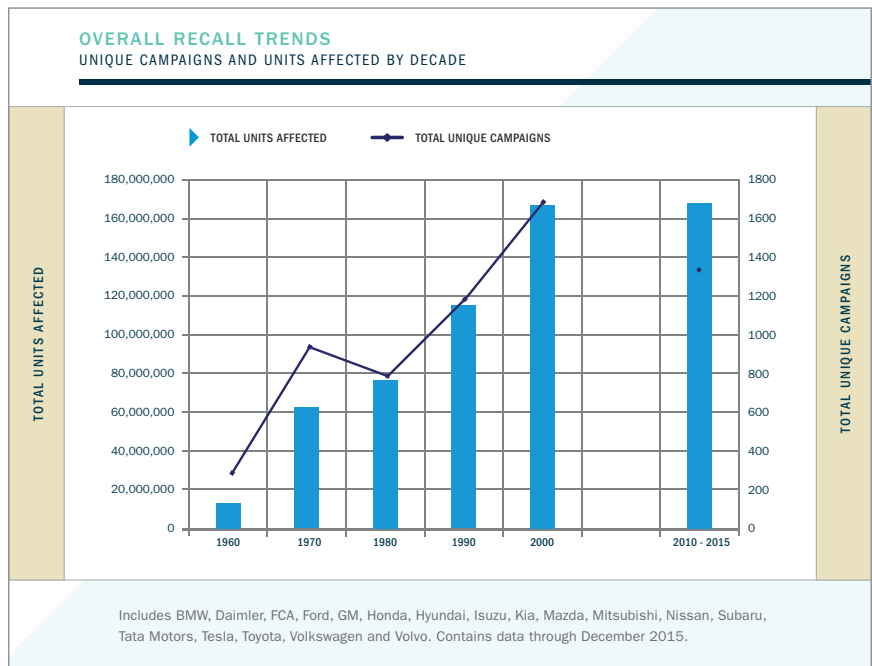
Although you may be feeling queasy about sending a hard-won and loyal customer out to the Auto Mile, non-dealership repairers are nonetheless well-positioned to gain goodwill by at least letting your patrons know that a recall is in play and assist in answering their preliminary questions.

Official notifications sent to drivers — if they even make it into the hands of the vehicle’s correct current owner — frequently end up “under the pile of junk mail, and you can help with that education,” reports Ann Wilson, senior vice president of government affairs at the Motor & Equipment Manufacturers Association (MEMA).

“It demonstrates to your customers that you have their best interests in mind, and it paves the way to have the work done,” she points out. “You have the ability to look up the VIN when you have the vehicle in your bay. It shows that you’re on top of the new technology and that you know what’s going on.”

Wilson suggests that “you want to have a system to do it; find somebody on your staff who is computer-savvy who can follow the recall notices when they come out.”

Recall repairs tend to be exclusively within the dealership domain because of the federally mandated responsibilities of OEMs to effectively remedy the problem. And as Capitol Hill committees hold hearings on the amount of recall notices that have yet to be heeded by the motoring public, regulators, automakers, suppliers, insurers and other industry organizations are implementing programs aimed at motivating drivers to actually come in and get



their repairs accomplished.

Throughout the U.S. in 2015 a record-setting 51.2 million vehicles, nearly 900 separate recalls, were issued notices, topping the 50.9 million vehicles recalled in 2014. During the first eight weeks of 2016 there were already 84 new recalls impacting 8.6 million vehicles.

As many as one-third of all American car owners have experienced the unpleasantness of receiving a recall notification about their vehicle, according to a recent national poll conducted by Liberty Mutual Insurance.

“We found that 62 percent of those surveyed believe it’s the manufacturer’s responsibility to notify them if their car has been recalled. In many cases, however, car owners are sometimes unable to be notified by the auto manufacturers as they’ve either changed addresses or the vehicle has changed ownership,” notes Chad Lovell, the carrier’s manag-

ing director of emerging partnerships and strategic programs.

“Despite increasing odds that car owners will receive a recall notification at some point during their ownership, 14 percent of Americans question whether their car manufacturer could even contact them in the event of a recall. The overwhelming majority of Americans — 91 percent — reported they would find it valuable if someone proactively notified them that their vehicle has been recalled,” says Lovell, referring to Liberty’s recent launch of its Auto Recall Notification Service that utilizes up-to-date recall data compiled by third-party vendor CarProof.

With access to VINs and policyholders’ most current contact information, “we have a direct line to the driver that auto manufacturers may not have to provide a proactive alert to any recalls associated with their cars,” he says. Clients can also

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>> CONTINUED FROM PAGE 6

able to explain to insurers how aluminum is different than other materials; its repairability and repair techniques; and the special equipment, materials, training and certifications it requires." He continued, "Cars and repairability are changing so rapidly, but labor rates aren't necessarily changing with them. Shops today will be setting the precedence for aluminum repair and labor rates with insurers — make sure you are an expert."

Another dimension to aluminum repair investment that Bono discussed is that certifications for aluminum repair do not often cross over to multiple manufac-

turers. Additionally, some manufacturers require the use of specific equipment that might not be applicable to other manufacturers' recommendations.

Thus, shop owners need to carefully assess their business and the vehicles they see in their shop in order to choose a strategy that will accommodate the forthcoming aluminum repairs and will allow them to pay off the investment. Addressing return on investment for aluminum repair, Bono explained, "You're going to have limited potential in recouping your investment. Making the investment in aluminum repair does not guarantee an increase in sales. The investment in-

cludes tools, training, shop space, inventory, etc., and these investments will not replace current expenses — they will be additional. Lastly, this investment may not increase your work load, but it may allow you to continue to repair the vehicles you've always been fixing."

While Bono's presentation may have proved that aluminum repair investment is challenging at best, he ended on a hopeful call to action. Bono encouraged attendees, "As I said before, you are all experts at what you do. My goal here was to give you enough food for thought so that you can go back to your shop and make an intelligent decision." ■

>> 3D PARTS, CONTINUED FROM PAGE 6

with a lighter weight; machining or casting processes generally can't match those capabilities.

While market research firm SmarTech estimates that 3D printing in the automotive industry will grow to \$1.25 billion by 2019, the bulk of that activity is around prototyping and creation of tooling and molds.

Technology consulting firm Capgemini, however, expects the industry will soon see the first design prototype of a car that has more than 50 percent of its parts 3D printed. Last year, design collective Local Motors printed an entire car on the floor of the SEMA conference, and earlier performed a similar feat when it produced its Strati prototype vehicle at a number of other conferences.

However, it's unlikely that the auto industry will adopt 3D printing as a way to mass produce metal parts. Printing metal is a more complex, time consuming and expensive process, which makes it impractical for the type of high volumes required by most OEMs. The reason that Airbus and Alcoa can move forward is that the number of total parts needed in any given production run is comparatively small, and the production time for each aircraft is very long.

That's why there is more traction for

printed production parts in aviation. GE Aviation, for example, will include 3D printed parts in its CFM LEAP engines, a first for the industry. The 19 printed fuel nozzles are 25 percent lighter and also more durable than the previous version and can be made as a single piece. (The original nozzle was made from 18 separate parts). The Airbus A350 XWB includes more than 1,000 3D-printed parts, and Honeywell has tested a printed heat exchanger.

Where 3D printing will make a big impact is in customization. The interesting thing about the Local Motors Strati, for example, is not necessarily that it could be (mostly) printed; it's that the design could easily be changed or altered each time Local Motors printed one. Last year, Local Motors printed its LM3D Swim vehicle on the show floor at SEMA, with plans to release a road-ready version of the car in 2017. However, the majority of the metal parts were not printed.

3D printing does allow automakers to create molds and tooling that can easily be recreated or altered much more quickly and cost-effectively than traditional methods. Automakers can also use this technology to create blind geometries and change the way parts and panels are designed.

"It forces you to look at the functional duties and elements of your car," says

Alex Fiechter, Local Motors head of product development. "Instead of an exterior panel, you can make that a body structure to absorb a crash. You can make the part such that it absorbs impact, provides structure and accommodates aesthetic needs all in one part."

And molds could easily be changed or created to generate new sheet metal parts. "The minute you want to change one feature on a mold, you've potentially caused a huge problem," Fiechter says. "The value proposition is really that the technology is very dynamic and flexible."

Instead of replacing existing mass production methods, 3D printing will enable a new level of customization for specialty vehicles. 3D printing can create very lightweight and strong constructs and geometries. However, the economies of scale simply aren't there to make production of large numbers of metal parts feasible.

Toyota recently unveiled a concept vehicle called the uBox that includes a customizable, 3D-printed dashboard. The vehicle was created as part of a project with Clemson University's International Center for Automotive Research in South Carolina to create a vehicle that was appealing to very young drivers.

Continue reading at [ABRN.com/3Dparts](http://ABRN.com/3Dparts). ■

>> CONTINUED FROM PAGE 8

log into Liberty's eService system to see if their vehicle has an open recall.

Only 42 percent of those surveyed prior to the Auto Recall Notification Service's rollout made an effort to check if their vehicle is subject to a recall, and this habit is more pronounced among the 18- to 24-year-old age group (51 percent) than with the 55-plus baby boomer generation (37 percent).

"This recall notification program is a value-added service and unrelated to a customer's coverage or premium. It is up to the customer to follow up and bring their vehicle to be repaired," explains Lovell, and it is also unrelated to patronizing shops belonging to Liberty's direct repair program (DRP), known as the Guaranteed Repair Network. "Customers may get their vehicles repaired at the shop of their choice; the service is only designed to notify customers about safety-specific recalls."

**Remaining on the radar**

Aimed at shop owners, J.D. Power's new SafetyIQ system incorporates documentation from the National Highway Traffic Safety Administration (NHTSA) to present daily online updates regarding vehicle recalls, technical service bulletins and driver-filed complaints in a searchable database covering make, model, year and component.

"With SafetyIQ, we're bringing together critical information that has been buried within piles of data to help automotive professionals analyze trends and quickly access the information they need to improve vehicle safety," says automotive segment Vice President Renee Stephens.

It allows you to spot trends, develop benchmarks versus your competition, and prioritize areas of focus, she adds. "The information is particularly valuable for data on vehicles over three years old,

which typically receive the highest volume of complaints and may have fallen off the radar of manufacturers because they are no longer under warranty."

"A key part of keeping customer cars well-maintained is making sure the recall repairs are up to date," observes Vern Poyner, general manager at Carfax, which has collaborated with Dealerlogix to produce an integrated version of myCarfax "so dealerships can identify more vehicles with open recalls in their service lanes. Service advisors writing up customer vehicles using the enhanced Dealerlogix system are automatically notified of open recalls on them, including off-brand vehicles."

"This integration automatically looks up open recalls and adds them to the appointment or repair order with zero effort on the part of the service advisor," says Dealerlogix President Mark Brandon. Continue reading at [ABRN.com/recall](http://ABRN.com/recall).

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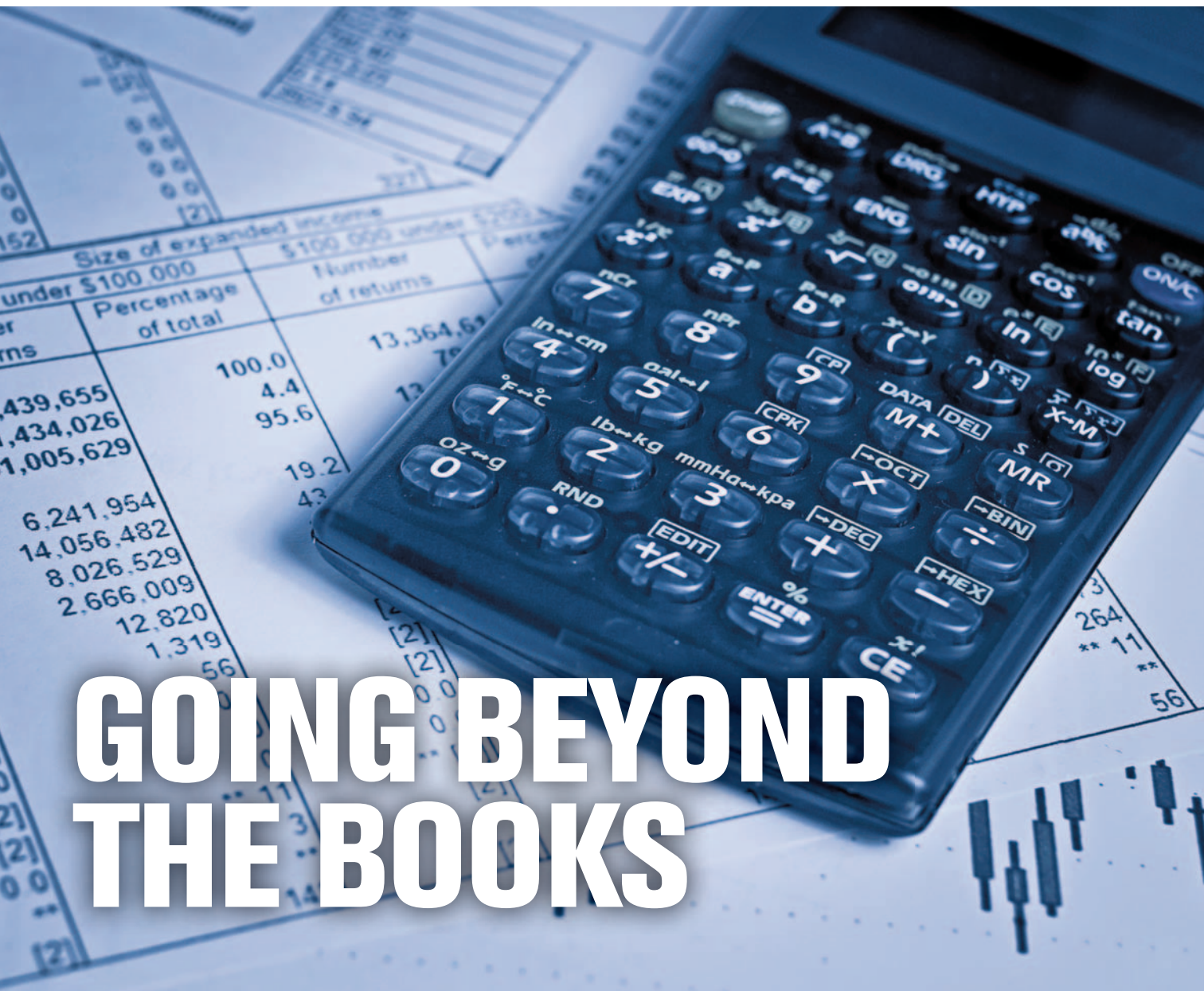
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INDUCTION INNOVATIONS



# GOING BEYOND THE BOOKS

Paint & materials accounting is more than just debits and credits.

**JIM COMPTON** // Contributing Editor

Accounting for paint and material (P&M) costs can mean different methods, reports or systems depending on who you are talking to. In the auto body repair business, everyone seems to know what P&M sales are, while the related costs — or costs of

goods sold (CGS) — remain a bit more of a mystery. I pose that there are really two types of accounting for P&M costs.

One of my favorite old adages that warrants repeating is, “You can’t manage what you don’t measure.” So let’s begin by talk-

ing about the first type of P&M accounting: the bookkeeping aspect. We want to manage P&M margins and since margins are the difference between sales and costs, we want to make sure our P&M costs are directly aligned with our P&M sales. P&M sales are fairly easy to figure out — on every RO there are subtotals on the bottom for the P&M sale. Let's keep it simple and just use that.

There are several systems or programs for calculating P&M sales, including the default calculation of \$xx.xx dollars for every refinish labor unit billed. Other systems and methods include Mitchell RMC (Refinish Material Calculator) Paintex, PMCLogic and others. But for this article, we are going to focus on the cost side.

Regardless of how you calculate P&M sales, you still end up with a number on each RO. Everything included in that P&M sale on the RO should have a corresponding cost. Likewise everything not included in the P&M sale needs to be accounted for elsewhere.

So let's start with your paint bill. Generally, shops purchase most of their paint and material from their jobber. With that assumption, we need to take all P&M costs billed by the jobber and post them to CGS against P&M sales. There are several methods; some may work better than others.

Method 1: Take all the purchases from the jobber and post those to CGS for P&M. One potential problem with this method is the assumption that everything is truly a P&M cost. It almost always never is!

Method 2: Have the jobber bill everything on separate accounts for better tracking — one for taxable and one for non-taxable. Potential problems include a) some states tax all purchases; b) some states have no sales tax; c) some states tax items differently than other states; and most importantly d) this method is based on each state's taxation method and likely has only a little to do with the

corresponding P&M sale.

Method 3: Have the jobber create several accounts or subaccounts and bill items by these divisions. For example, typical subaccounts may include a liquid account (most likely almost all part of P&M cost) and an allied account (some of which is P&M cost and some of which isn't). Often we see additional accounts set up for the Body and Detail departments. This is better than Method 2, but we still may not have as accurate a system as we would like. We are often counting on the jobber staff, a counter person, sometimes a driver to make judgement calls on which account to bill something under. While the breakdown of paint and materials into categories or subaccounts makes this a much better method, and one that can be greatly improved with separate authorized stock lists for each account, this method limits what is purchased and also defines how to divide paint and materials.

Method 4: Use the great tools provided to us by the paint manufacturers, including scale or mix reports. Since liquids make up between 60 percent and 70 percent of our P&M costs, we can fairly quickly calculate those non-liquid costs and come up with a more accurate P&M cost. Great, right? Except a couple of quick notes: 1) Your paint staff needs to record everything on the scale, including clears, primers and sealers. This is the biggest potential for problems, despite what some believe. A large percentage of shops are not getting everything mixed on the scale. Most systems allow for mixing some products for multiple ROs (clear and primer, for example) and may allow for the added entry of non-scale mixed products such as plastic adhesion promoter, GP solvents, etc. 2) These mixing systems don't know about your specific pricing on paints, though several systems allow for this added calculation. You will also need to input your allied percentage, or accept the system defaults.

Method 5: Have the jobber (either on their own, or with available third-party help) create a list of all your purchases each month and break all items into several categories. First, break out everything into two main categories 1) P&M CGS and 2) everything that is not part of P&M CGS.

While we are breaking the purchases into these two main categories, it may be very worthwhile to further divide these categories for better accounting and comparative analytics. This works best for multi-shop operators or shops working with their jobber, paint manufacturer or 20 group and performing financial comparisons. For example, separating color and comparing dollars and volume spent per RO or per refinish labor unit may provide great insights as why one particular shop's P&M margins are better than another. We can make similar comparisons to other P&M costs such as masking, abrasives, etc. We may have one P&M CGS general ledger account, and that account may have several subaccounts with which management can drill down into in order to better control costs and manage P&M margins.

Whatever method you choose, you should now be able to come up with a CGS for your P&M sales. And if you stay consistent, you can track it, manage it and hopefully improve it.

### **Be held accountable**

The other type of P&M accounting is accountability. For a lot of managers, accountability is a great tool and system to manage both materials and people. Keeping track of material costs as noted above provides a benchmark to measure against. The first step that most take in accountability is to track the costs with the person, team or department using the materials. Again, this works even better if you have some comparative data such as from your jobber, paint manufacturer or 20 group. If two team members doing similar work have substantially differ-

ent cost profiles, two questions come to mind: 1) Is one team member over using materials? and 2) Is one team member skipping any required steps? Cheaper is not always better.

Often we see shops trying to hold personnel accountable with measure-

ments of output — hours vs. dollars sold or hours vs. material costs. This can obviously be done for both paint and body techs. Simple measurements such as dividing the material cost by the labor hours provide a good measurement of cost per hour. Comparing this value or

KPI with other similar employees can help provide accountability.

These are great measurements and can be used prudently as motivational tools or as opportunities to address training, as long as the comparisons are for very similar work. Comparisons need to be fair and consideration may need to be given for different work performed.

With the rapid pace of change and the need to continue to improve P&M accountability and performance, perhaps the least often used accountability — but perhaps deserving of consideration — is the accountability of procedures and facilities. There is a measurable difference in both material use and productivity when painting parts on the vehicle vs. painting parts off the vehicle. Overcrowded shops loaded with vehicles not currently being worked on, such as those awaiting parts, approvals, etc., can tax the ability to move vehicles through the shop, tying up both space and time. Similarly, there is a measurable difference when a spray booth is well maintained and helps protect against dirt and imperfections or when SOPs are in place and followed so that, for example, every job needs the same number of coats of primer to be properly sanded or blocked.

Perhaps it is time to measure and hold accountable our procedures and facility as well as people and products. Before you make a significant change in procedures for your facility, perform several measurements or KPIs. After making the changes, measure again. Hold the procedure and the change accountable. If the results didn't reflect the desired change or improvement, re-examine the change.

Accounting is more than just debits and credits; it is also accountability of people, productivity and procedures. ■



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# CREATE FLOW BY ELIMINATING WASTE

Avoid profit busters in your business by removing unnecessary steps

MICHAEL GIARRIZZO, JR. // Contributing Editor

Strangely enough, you'll probably never run into anyone at a lean manufacturing conference named Tim Woods. If so, he'll likely be the most glared-at guy in the room. That's because "TIMWOODS" is an actual acronym for the eight most dreaded forms of waste in a production environment. They're the key reasons for costly disruptions in your shop's productivity. Read on to determine if your operation is being victimized by any of these profit busters.

### **Transportation: Eliminate movement, reduce waste**

Transportation involves the movement of people, product and information. The more movement (the more that vehicle is pulled in and out of the shop, for in-

stance), the less efficient the process is, the more time is wasted and the higher the risk of mistakes occurring.

In a traditional environment, that could mean frequent visits to the storeroom every time a part is needed. Once that part is located, it has to be moved to the respective job site. Or, when orders arrive, techs generally have to pull their own parts from a centralized material location and transport those parts to their work stations.

In a process-centered environment, "kits" (or parts carts) are assembled and equipped with ALL parts, materials and detailed information (and even photos and voice recordings highlighting special instructions for the tech) for point-of-use access. Because parts are mirror-matched prior to joining the repair kit,

the techs never have to wander the shop floor looking for missing components for the job or discover late in the game that they have a damaged or incorrect part.

The key to eliminating transport waste is to decrease unnecessary distance traveled by the tech in the repair of the vehicle, which greatly reduces the time required to get the job done right.

### **Inventory: Just in time or just in case?**

Shops with an overstock of material and paint inventory take on substantially more risk than process-centered environments that order precisely what they need to complete the vehicle repair (or carry only a few days' worth of inventory versus weeks or months in a traditional shop en-





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vironment). Besides tying up cash, excess inventory is a potential breeding ground for unconscious waste or even “leakage” that goes unnoticed because of the volume of stored products. Furthermore, an abundance of material on the shelf fosters a throw-away mentality, as team members can always go to the inventory room or cabinet for replenishment.

Implementing a just-in-time inventory philosophy will greatly reduce cash burdens on the business and provide greater control over paint and material inventory. With that increased control, you’ll be better equipped to track usage measurements and accurately determine reorder frequency.

Inventory also relates to the volume of work you have on the property and the current capacity that you have at your facility. That optimal formula is actually pretty simple if you understand the average number of days it takes to get through your process, and the anticipated or desired delivery rate in dollars and cars. Efficient collision repair operations understand capacity and the optimal number of cars and job sizes they can handle on a daily basis.

Excess inventory dilutes the effort and attention required for each vehicle and repair. To illustrate, a lot filled with vehicles waiting to gain entrance into the shop plays havoc on the human psyche as team members push to keep up with demand. Further, the sheer amount of inventory needed on hand to address all those vehicles (and the space to store that inventory) will quickly drain an operation’s cash flow.

So that surplus inventory situation isn’t doing anything to accelerate the delivery of cars (which are currently in process) to their owners. It’s actually slowing things down.

Knowing your shop’s daily capacity, and working to keep the right amount of work on the lot to fill that capacity is key. Anything over that capacity is waste and subsequently contributing to negative performance.

### **Motion: Is the team bending over backward to complete the repair?**

In the proud, herculean environment of a collision repair shop, rarely does management hear complaints of stressed limbs, achy backs or bruised hands. But those little nuisances definitely impact performance. The constant bending, turning and contorting into tight spots — while working in often poorly lit work stations — will take a toll on output and quality, and can often lead to fatigue, stress, accidents and injuries.

This form of waste can be controlled by ensuring that repair kits are assembled with point-of-use material and tooling, and that parts stands are easily accessed. Is the vehicle positioned properly or are techs crawling over (and under) it to work? Is there proper lighting in the shop and directed at the repair point?

An ergonomically correct work environment will cut down on the number of tired, frustrated, beat up and accident-prone members on your team.

### **Waiting: The leading cause of waste on the shop floor**

You read that correctly. Any time a repair job grinds to a halt, your performance is affected.

There are so many reasons for waiting in this business, and that presents opportunities to improve the effectiveness of the operation. From poorly diagnosed initial assessments (“Wait, here’s another item that wasn’t on the original repair order”) and slow third-party response (“We’re still waiting for the approval”) to parts availability (“That re-order will take one to four days”) and workflow (“Just waiting for someone to tell me what to work on next”), the act of waiting increases time and stress, contributes to communication breakdowns and adds costs to the job.

Every form of wait waste extends the cycle time of the repair. A process-centered environment utilizes various forms of controls and a “first-time qual-

ity” mindset that provides an opportunity to decrease “wait” in the quest for a more optimal workflow.

### **Over-production: Biting off more than you can chew**

In a traditional collision repair environment, individual workloads act independently of each other, making it increasingly difficult to deliver consistency in quality and on-time performance. The key to maintaining those workloads in traditional shops is to have enough vehicles on hand to keep individual paychecks healthy and techs constantly working. Unfortunately, over-production doesn’t lead to continuous, predictable and dependable flow.

A prime example is producing body repairs at a greater rate than a shop is able to accommodate on the refinish side. Continuing to produce and allow cars to stack up behind the booth increases internal inventory while doing little or nothing to increase the pace of delivery if that downstream operation has limited and finite capacity.

### **Over-processing: Know when to say when**

Are your techs wasting time disassembling a total loss? Are they sanding and buffing the whole panel flat when all that is needed is to address small nibs and imperfections to match factory texture?

Over-processing means going needlessly beyond manufacturer standards in the repair process. This requires more time, more material and more unnecessary costs. (In some cases, this can even devalue a car.)

Therefore, it’s vital to stay up to date on manufacturer guidelines, perform visual inspections and use sound judgment to determine just how far to take the repair process.

### **Defects: Don’t ever look back**

Defects, rework and supplements are words that make shop owners cringe. They stop the process and slow down



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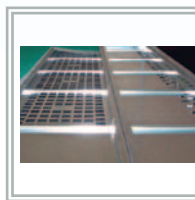
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the repair. More importantly, they cut into the bottom line.

What do you have to do to guarantee that you never return to that previous step in the repair process? In a process-centered environment, the answer begins at the first point of customer contact in the assessment phase. Can they de-

scribe the incident in detail? Were there beverages in the car at the point of impact? Did the vehicle hit a curb or pole?

Collecting the proper information upfront — and validating work after each step in the process — will eliminate defects downstream and begin to chip away at that costly “we budget for

supplements” mentality. First-time quality and completeness in every step needs to be the overriding thought process.

### Skill sets: Your team knows best

This form of waste often deals with the under-utilization of an individual's skills, talents and intelligence throughout the process. It often addresses those situations where team members may be under-skilled or even unqualified for a particular task. But let's take a deeper look and discuss the positive impact your frontline crew can have on your overall operation.

More traditional collision repair operations are largely all about a “keep quiet and keep working” mentality — let the techs do their jobs and management will do its job. But we've come a long way to changing that mentality.

Process-centered environments work because they constantly rely on team members to consult on process improvement. And the result of this involvement is some pretty innovative and creative solutions to everyday processes that save money and time, improve quality and boost morale.

Involving your team members in the decision-making process is the best way to effectively utilize their skill sets and can dramatically improve your process.

### Kick TIMWOODS out of your shop

Where do you see waste in your operation? If any of these waste streams sound familiar, the best thing to do is tackle just one area initially and see if the process downstream is impacted. Once you experience the positive results of eliminating waste in the process, you and your team will want to engage in a vigilant and ongoing “waste watch” to ensure that this process killer doesn't show up again. 📌



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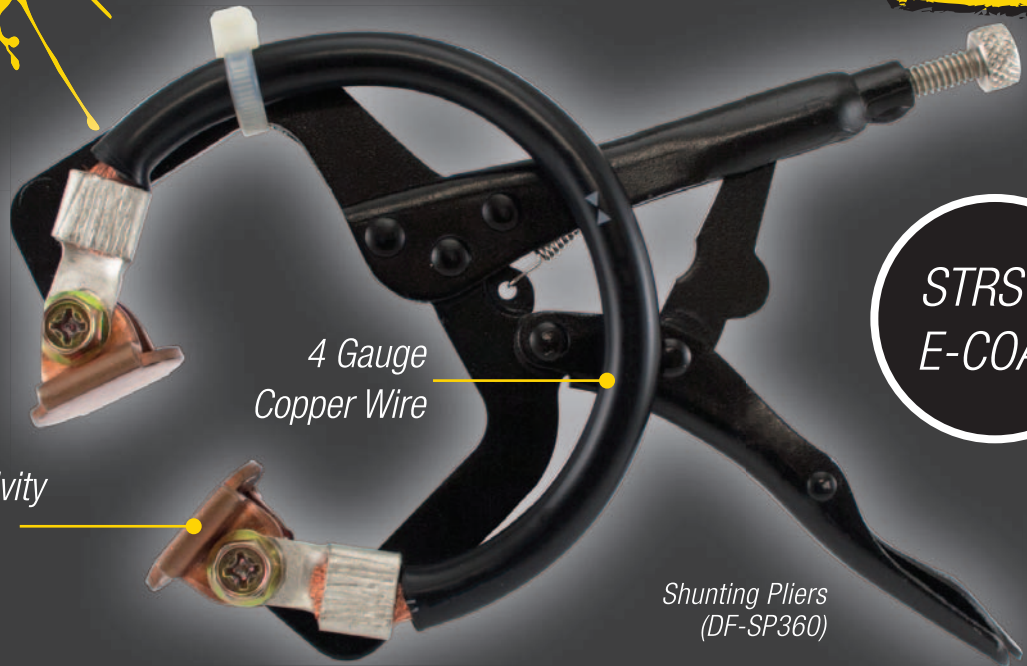
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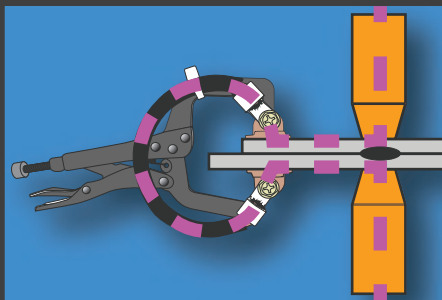
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Simply remove the coating from the outside surfaces, position the shunting clamp at the spot weld site, and the spot weld is made at the adjacent site. The current chooses the path of least resistance when confronting the non-conductive E-Coat, the shunting pliers facilitates the electrical current from one side to the other. The E-coat at the mating surface burns away. The process is quick and despite most of the current flows between the electrode tips the current detour was brief but necessary. On to the next one!

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# Get your staff to work as one cohesive team

Instead of working individually, get your staff to work collectively toward one goal

In a previous column (“Employee buy-in,” May 2016), I discussed how I was able to transition away from a flat-rate pay plan without losing a single technician in the process. The team-pay system we use is a bit different than the ones I hear about at many other shops, so I thought it might be helpful to share a few details in case you’re considering a similar change at your shop.

First, most shops that shift to a team-pay plan tend to have multiple teams within the shop. They might treat the body techs as one team, and the paint shop as another, or they might have multiple teams that each include some body and paint department staff.

I can see some value in that. But as a business owner, I come back to sports analogies a lot, and for me, I want our shop running as one team, all with the same goal. A sports team might have an offense and a defense, but the points all go up on one scoreboard. Everyone is working toward the same thing.

So all our flagged hours go into one pot for the entire shop. When a car gets painted, a body tech is getting paid off that, and when a vehicle gets reassembled, the paint department makes money, too.

How the money in that pool gets apportioned out to each employee is based on their clock hours and their skill level. Everyone has an hourly clock rate, and they receive that rate for every hour they are on the clock.

How much they receive above and beyond that is based on the efficiency of the whole shop, the whole team. If all employees combined for a pay period have a total of 1,000 clock hours, but the shop produces 1,500 flat-rate hours, then the shop was 150 percent efficient, and everyone receives 1.5 times their clock rate for every clock hour they worked.

The beauty of the system is that we are not dependent on a single individual tied to a particular job. Employees in the shop are also able to pick out what they do best and what



**A SPORTS TEAM MIGHT HAVE AN OFFENSE AND A DEFENSE, BUT THE POINTS ALL GO UP ON ONE SCOREBOARD. EVERYONE IS WORKING TOWARD THE SAME THING.**

they enjoy doing. If a guy is great at doing mudwork, then that can be what he ends up doing. Not all day every day, but that is the bulk of his job. Typically those guys don’t like R&I’ing parts or working on the frame rack. That’s left to guys who may not like doing mudwork. My fastest R&I guys can do that all day, without feeling like they need to pick up a side job now and then in order to make a good paycheck.

As I mentioned in the previous column, the results of the pay-plan change were pretty immediate and dramatic. At one of our shops, for example, we were able to take a facility that everyone thought was basically maxed out at about \$4 million in annual sales and actually easily produce \$6 million out of it. My techs are working fewer hours, making more money and enjoying a better quality of life.

This system also fosters a culture of training. Our A-level techs realize that if they can help less-experienced employees improve, they all make more money by increasing the shop’s overall efficiency. That leads to a mindset of, “The faster he knows what I know, the more hours we turn.”

I have to reiterate that all of this requires a high level of trust among your employees, management and ownership. My employees had to know that no matter what route we took with the pay plan, they could trust me. I remember once when one of my seasoned techs noticed a new hire who was meticulously keeping track of every hour he logged. It was great to hear my long-term employee tell the new guy, “You won’t do that for long. Ryan is going to treat you fairly. I’ve been here 10 years, and I’ve never been shorted once.”

That is what it’s all about for me. When my employees trust in me, trust in themselves and in each other, we can accomplish things that others simply cannot. 🏆

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# Develop a collection culture to ensure customer payment

Getting your clients to pay for service when insurers won't requires a plan

In last month's column, "A new collision blueprint for pricing and payment reform," I suggested that shops, in order to remain profitable, will need to turn to customers for service payments when insurers aren't footing the full bill. Let's now take a look at how you can realistically implement this practice in your shop.

Avoiding collections requires that you get customers to pay their bills in full — at delivery, when possible. That means your staff must be assertive when discussing balances with customers. It must be recognized that adopting and committing to this new policy could be a significant challenge in some collision centers and not be an acceptable practice, if a business chooses to maintain its current DRP insurance contracts.

As another example, a collision center serving a town of 10,000 will inevitably encounter customers in their daily life outside of work. It can be difficult to speak frankly with customers who don't pay and worry about the awkward interactions that might occur later, for example, at the grocery store or at our children's school. Nevertheless, since you have invested time, money and effort into the quality of repair you provide, it's only reasonable to expect your customers to recognize and meet their financial obligations to you.

Making this concept part of your office's "collection culture" is crucial. Consider tasking a dedicated employee — a customer billing rep — as the designated informant on such matters. Customers appreciate having someone on their side and knowing ahead of time what they'll owe at delivery. Being proactive and using effective communication may take extra foresight and preparation, but they are changes that will reap improvements quickly.

Receiving proper payment for repairs at the time of delivery requires that your staff know the actual amount of any differences owed, including knowing that your labor rates are based on your actual costs, correct material charges and sublet mark-ups. This helps them communicate information effectively. Again, these differences should be communicated to your cus-

tomers as early as possible in the process, not at vehicle delivery. After doing a proper analysis of all your business costs, you decide what you should charge for all labor and work performed at your collision center, not the insurance company. Follow the steps outlined below to communicate ahead of time exactly what the customer will owe on their vehicle delivery date.

At the end of the estimate appointment and again at vehicle drop-off, assertively inform your customer of the necessary payment required at delivery. Be sure to inform your customers of your office financial policy. Explain to them that it is their responsibility to pay for what their insurance company will not cover. Train your staff to answer appropriately any customer responses they may encounter. Check out the sample customer collection scripts on page 26 for suggestions on how to handle customers and common refusals of payment.

If a customer cannot pay at your shop at delivery, you might want to consider establishing your own internal collections policy and have them sign a promissory note. Collections should involve more than just sending the customer one or two statements per month. If a customer fails to pay their balance in a reasonable and pre-agreed amount of time — for example, three months — begin your follow-up with a mailing. This should be a statement and a call from your staff. Scripts should be used on these calls. Be firm but to the point: request payment and even consider offering to set the customer up on a new longer and lower amount payment plan. In the event that this doesn't work after two more months have passed, follow up for the next few months with both phone calls and warning letters, which outline the fact and notify the customer if their account is going to a collections agency.

At that point, you have the option to write off small balances as losses, which can be an advisable choice in some cases. Medical billing offices report that they have to request their fees while patients are still at the office because bills sent later typically recover only about half of what a practice is owed.

According to Reed Melis, an accounting and tax business

**BEING PROACTIVE AND USING EFFECTIVE COMMUNICATION MAY TAKE EXTRA FORESIGHT AND PREPARATION, BUT WILL REAP IMPROVEMENTS QUICKLY.**



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## SAMPLE SCRIPTS



**Customer:** "I didn't know I owed this."

**Response:** "We call all customers with balances and inform them of their obligation. We called you on \_\_\_\_\_. The collision center has performed a service and should be paid for it."

**Customer:** "I don't have any money with me."

**Response:** "We accept all major credit and debit cards. We require customers to pay for the services the day we deliver the finished vehicle, and did inform you of our company financial policy. Would you like to make the payment or would you like us to reset your payment plan to a lower monthly payment?"

specialist at Paar, Melis & Associates, "By recording sales at full retail, it shows what the true opportunity cost the work order has. Writing off the uncollected portion as an expense that can be measured gives the business owner the true lost opportunity. The gross revenue of the business reflects the total of what should have come in the door. This may be favorable to both a buyer of the business as well as the bank, since they may see the potential."

Rodney Vance, a long-time industry veteran with a degree in accounting, states, "There is a tax benefit to writing off your uncollected accounts receivables. First you make an expense line item and secondly, you deduct that amount from your taxable income. Any portion of money not collected can be written off, as well as the money spent collecting any debt." If you decide to move into debt recovery with an out-

side company, make sure to use a trusted, vetted agency. Before signing any contract, ensure during sign-up that they know exactly how you'd like your accounts to be handled. It may never be possible for your shop to collect 100 percent of what you're owed from customers — but implementing firm payment policies could be the best way to avoid marginal profit issues in your business.

Insurance industry "short pays" are going to increase in the future. Simply put, without long-term reforms that improve revenues, collision centers will increasingly be forced to choose between reducing the quality of repair or shifting costs to consumers. Tighten up your processes for the benefit of your cash flow. 📡

**JIM YOUNG** is an ATI collision coach and creator of the iTechnician and iPainter apps for the industry.

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# Innovative repairers

Visionary ownership produces top KPIs and continuous work flow

**JAMES E. GUYETTE** // Contributing Editor

➔ A willingness to take a chance on trying out innovative repair techniques, including early adoption of robotics, has culminated in an inventive level of efficiencies at North Dakota's Rydell Collision Center.

"We are very fortunate to work for a company that wants and expects us to always look at ways of improving our process," says body shop manager Randy Sattler. "They understand that some things will work and some won't, but you won't know until you try."

Located at the flagship Rydell GM Auto Center in Grand Forks, N.D., the shop is considered the "mother store" of a vast Rydell Corp. network of nearly 80 independently owned dealerships, including their affiliated body shops, throughout the Western United States.

Founded in 1954 by Leonard Rydell, second-generation owner Wes Rydell "was born into this business," and since taking the helm in 1976, has consistently implemented the latest in technological innovations and management strategies to produce a pattern of "continuous work flow" throughout the operation. The same philosophy is being carried forward by Brian Rydell as he assumes a third-generation family ownership role.

Sattler views Wes Rydell as an important mentor because he displays "the patience and insight to know that we would need to fail in order to learn what we would need to do" for achieving top-of-the-line KPIs.

Sattler also has high praise for company Executive Manager Greg Sorum. "Greg was typically the day-to-day guy who kept us focused and on-path. When things didn't go as planned, he was typically the guy that held my hand and really explained to me what 'fail hard, fail early' really meant. Greg was there many times to keep the ship righted and moving in the right direction."

An attention-catching fail arose during the shop's attempt to implement new processes. Upon approaching a veteran technician at quitting time, Sattler was politely informed that the staff had determined that the announced innovations were doomed to fail because the workers were never told why they were being introduced or how the technicians would benefit.

"We did not include them in any way during the development or discussion of the new process," Sattler ruefully recounts. "We learned that we failed before we even really started by not including



## RYDELL COLLISION CENTER

Grand Forks, N.D. // [www.rydellcars.com](http://www.rydellcars.com)

**Wes Rydell & Brian Rydell**  
Owners

**35**  
No. of employees

**\$950**  
Average repair order

**24,000**  
Total square footage of shops

**130**  
Number of customer vehicles repaired per week

**1**  
Number of shops

**22**  
No. of bays

**\$5.9 million**  
Annual gross revenue

**62**  
Years in business

**4.7**  
Average cycle time

the people that are touched, involved or affected by a process."

The incident reinforced the value of clearly consulting, communicating and seeking reactions when changes are being contemplated — a situation that management promptly remedied.

"We are truly grateful and appreciative of all our employees. Without them none of this would have happened," says Sattler. "Many times the employees do not get the recognition they deserve, for they are the ones who actually do the work."

### Theory of constraints

This genius being implemented at the shop originated with the work of the late Eliyahu M. Goldratt, an Israeli physicist

and business management guru who pioneered the “Theory of Constraints” paradigm that seeks to identify and rectify “variables” that can cause production inefficiencies.

Rydell and Sattler sat down and “discussed page-by-page” a 2006 Goldratt paper entitled *Standing on the Shoulders of Giants* to glean insights that could be utilized in collision repair. “My work life has been changed ever since that meeting,” says Sattler.

Another important development came via a visit with the Colorado-based Repair Plan Network, formed in 2008 to assist independent body shops competing against MSOs. It resulted in engaging the services of Bodyshop Revolution, a British consultancy that specializes in applying Theory of Constraints concepts to the collision industry.

A Rydell Collision Center upgrade in late 2014 included “tons of training” for

a revamping of shop procedures along with modernized electrical circuits and gas lines — plus one of the first American installations of a robotic catalytic infrared paint-drying system.

Although the overall investment amounted to \$500,000, Sattler advises his industry colleagues to avoid being “scared off” by such a large figure. Focus instead on altering your shop’s processes within your existing building.

At Rydell, five robotic units are in place, and the actual drying time for both paint and body filler now takes just one to two minutes — however long it takes the robotic arms to sweep over the targeted area. “We have reduced our average paint booth cycle to 45 minutes per vehicle. Once it goes through the paint booth, it’s back at the technician’s stall.” Watching paint dry and other delays typical of body shop operations have been significantly slashed.

“We’ve taken all of the variability out

of the paint side, but it’s less to do with the paint-drying robots and more to do with the process” taking place at each of the assorted stations within the shop.

### Bits and pieces

Twenty-six vehicles are addressed each day at Rydell’s amid an average cycle time of 4.7 days and a 4.9-hour daily touch time rate.

“We’re very good at monitoring and paying attention to operational innovations. We’re looking at all the ways to eliminate wait time from the time that the car hits the floor,” says Sattler. “We monitor the ‘flow’ of every car that is released for repair. If there is a stoppage of that repair, we try to determine the ‘why.’ Continuous work flow of every car released to the floor is an extremely important goal for us.”

The 20 technicians are treated like “customers” of the estimators as vehicles

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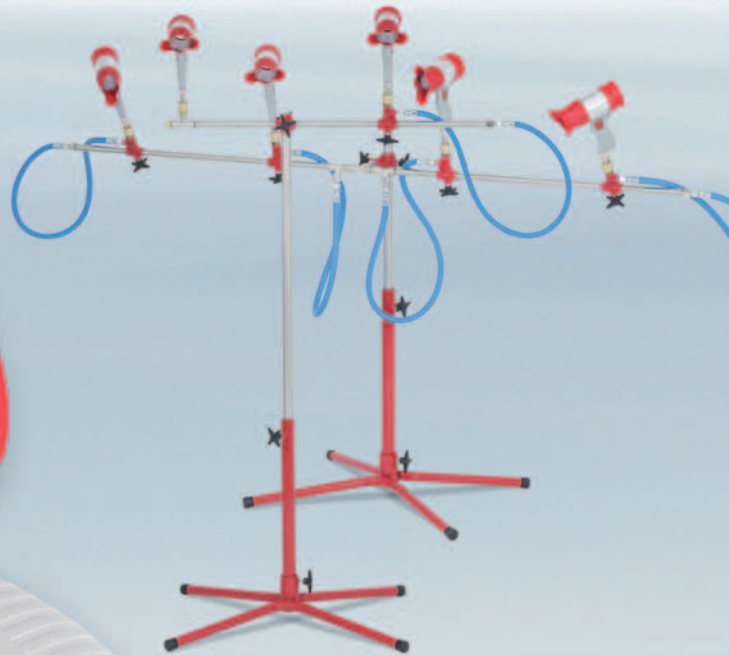
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are readied for repair. "If our estimating process causes our technicians to stop working on a repair because we missed parts, damage, etc., we address those situations the same as a situation with a customer where we failed at having them 100 percent satisfied with our repair."

A similar mindset is applied to managing insurer relationships. "We understand that on every insurance claim there are two customers involved in the repair process, the owner of the vehicle and the customer who is paying for the repair. It is our job to make sure that the customer's Level of Expectation, is at the insurance company's Level of Reality," Sattler says.

"We all know that many times the customer's expectations are not the same as the reality of the insurance company. This is how we know we can improve and impact the customer's satisfaction with us and also the insurance company.

Our goals are the same as the insurance company's — 100 percent satisfied customers that will recommend us to their family and friends."

### Realistic expectations

The expansiveness of the Rydell dealership network facilitates near-routine use of OEM components. OEM versus aftermarket price-matching is conducted on about 75 percent of the orders, which results in a preponderance of OEM products. A given part's quality is taken into account as well. "We've learned over time that rather than trying to fit an aftermarket hood it's better to use an OEM hood even if it's more expensive."

Closely coordinating with vendors is another effective method for reducing variables. "When we decide to change a part of our process, they are asked to be a part of the discussion so we all have the same expectations," says Sattler.

"We do not have the luxuries of metropolitan areas and multiple opportunities for many vendors. We need to have realistic expectations of our vendors, and treat them the same way that we expect them to treat us. They are a bloodline to our business, and we cannot survive without them."

As you might expect, the shop has become a showcase of innovative technologies and management strategies, discussing lessons-learned experiences with the other Rydell dealership body shops to use as they see fit.

"Planning for success in the future is very important. We are learning every day how we can improve and get better," he says. ☐



**JAMES E. GUYETTE** is a long-time contributor to *ABRN*, *Aftermarket Business World* and *Motor Age* magazines.  
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# Implement the best approach to ensure body shop profitability

## CONDUCT A SHOP IMPACT ASSESSMENT

**LEROY RUSH** // Contributing Editor

**D**o you ever wish there were collision experts who would come to your shop and help optimize your operations? Or, consultants available to assess your processes and identify what's holding your shop back from even higher revenue or profits? How about a partner to spend time in your front office and on your shop floor and help you implement change to take your business to the next level? If you have thoughts like these, you should consider a complete audit of all the functional areas of your business through a formalized shop impact assessment.

A collision repair shop impact assessment is a detailed, onsite review of operational processes and procedures of all the functional areas of your business from your front office procedures and estimating process; to damage analysis and parts department operations; to paint and materials utilization.

### How does it work?

A shop impact assessment is a multi-day comprehensive review of the operational

processes and procedures used in your shop — a wellness check-up for your business. This will arm you with the information needed to remain competitive. To meet today's demands of cycle time, on-time delivery, increased quality and the many other KPIs, you need to have an accurate assessment of where you are today and the opportunities for tomorrow.

An impact assessment will ensure the continued health and growth of your business and its ability to meet customer, insurance and financial performance expectations now and in the future. This is where trained consultants work closely with your shop to analyze its operations and procedures, benchmarking them against "real world" and "industry best" processes and procedures of the top collision operators in North America.

Collision experts can make observations and identify inefficiencies in your



**LEROY RUSH (RIGHT) WORKS WITH** Sherwin-Williams Automotive Finishes shop clients to perform an impact assessment.

Photo credit: Sherwin-Williams Automotive Finishes

current system. These observations are analyzed for opportunities, and then recommendations are made for areas of improvement. An action plan for implementation can be developed with the help of your respective paint supplier and other key vendors.

### Why does it work?

Consultants will spend a lot of time on your production floor, where they'll observe and discover challenges you might

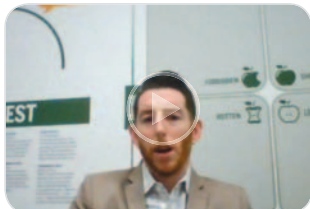
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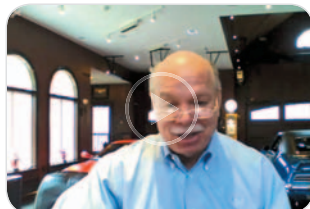


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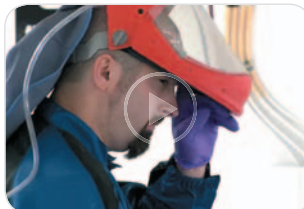
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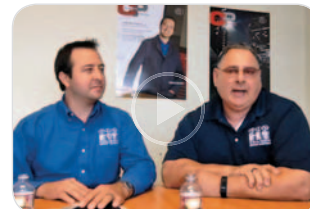
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## SOCIAL INSIGHTS



### COLLISION AVOIDANCE TECHNOLOGIES POSE NEW SERVICE CHALLENGES

"There are so many operating systems on cars today and they are constantly evolving to a point where it is almost impossible to learn every system on every year," says contributor John Anello. "I find the best way is to build a good foundation on how computer systems work and then crash course new systems as they come your way." **Find more tips for tackling these new collision avoidance systems at [ABRN.com/systemtackle](http://ABRN.com/systemtackle)**

### WHEN TO USE EPOXY, DTM PRIMERS TO ENSURE A HIGH-QUALITY REPAIR

Epoxy and Direct-To-Metal Primers (DTMs) can serve an important role in the repair shop by helping to prevent corrosion and promote bonding of materials. They deter corrosion by sealing the metal and protecting it from corrosive elements. **Look at when these primers should be used and how to apply them at [ABRN.com/epoxy](http://ABRN.com/epoxy)**

### CARSTAR DEVELOPS SOPs FOR ADMINISTRATION, PRODUCTION

Staff must not only know their duties, but also the order in which they should be tackled. Once you've created an

established list of position tasks for each employee, the tasks can be identified from most to least important, with those that impact customers directly having the highest priority. **Take these steps to ensure you are keeping your employees accountable: [ABRN.com/carstarsops](http://ABRN.com/carstarsops)**

### ARE YOU GUILTY OF BELIEVING ANY OF THESE COLLISION REPAIR MYTHS?

In this article, *ABRN* Contributing Technical Editor Larry Montanez breaks down the collision repair shop into departments and dispels the more common myths and misinformation. These myths emphasize how important training and education are to both our business plans and our futures. **Keep reading to find out more about what's myth and what's reality at [ABRN.com/mythsreality](http://ABRN.com/mythsreality)**

### OVERCOME SLOT TAB REPAIR CHALLENGES WITH EXPERT TIPS

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>> CONTINUES FROM PAGE 34

not see in just a walkthrough. What's important here is someone coming from the outside with a fresh, completely different perspective. Because consultants work with so many shops, they can make valuable insights on best industry practices.

At the end of the executive summary, your consultants will provide a customized action plan to implement positive change. It kind of goes like this, "This is what we've observed, this is what we recommend, and this is the action plan to implement those process improvements for your business."

### Why look at the overall process within a shop?

All collision repair shops are NOT the same; however, most have similarities when it comes to productivity and profitability, and even the top shops are no different when it comes to analyzing their business and overall process. These steps include:

- Financial control — to make sure a profit is made from the work performed
- Operational efficiency — to free up capacity in order to do more work
- Business development — to increase market share

Oftentimes, it's all about productivity and labor — the throughput. No matter how well any shop is doing, everyone can improve. Shops often see almost an immediate 5 percent to 20 percent profit increase just by process improvement and more efficient paint booth utilization.

### Do these work in the "real world?"

A weeklong, onsite impact assessment sealed the lean deal for Collision King in Lubbock, Texas with paint manufacturer and supplier Sherwin-Williams. The following are some observations noted by the shop's owner.

"They brought in a full team of consult-

ing personnel, so we had very good support," says Steven Tisdale, owner of the \$12 million-plus collision repair facility.

"Getting the work into the shop has never been our problem — it was getting it all out; but after the consultant came in and analyzed everything, we've gone from a six-day cycle time down to five; we've immediately reduced a whole day," he says. "The biggest area of improvement was damage analysis and parts correctness. Now, our medium and heavy hits have their own parts cart that wheels along throughout the job. Under the traditional model, we used to house those back in the parts department, the floor space of stalls or even just in the car."

"With the impact assessment, we don't have 'Cracker Jack' moments anymore," notes Tisdale, referring to the situation where 'you open the box and get a surprise' with wrong or broken parts delivered. "Our ordering process is now more accurate and each shipment is inspected. No longer are they leaving — and we accept! — a left headlamp when a right headlamp is the intended purchase."

"For example, we're physically putting eyes and hands on every part we get within two hours, and we match it with the old part," he says. "We've fine-tuned our repair process with the support of all our vendors to achieve better results. Our rigorous, new process ensures that every aspect of the customer's repair job is performed to the highest standard of quality, and it's backed by partnership and training with our vendors."

"We also observed that this program wasn't presented to us as a 'one size fits all in the real world.' We said we needed a program that connected all the dots for a complete lean approach and this was possible with the impact assessment's custom-fit operational approach. What then impressed us was the impact assessment created for us met our specific site requirements; that's

for a 26,000 square-foot, 32-bay, seven-building facility, and the more than 100 customer vehicles we repair each week. And finally, we were really impressed that the program was designed as a tactical, shop-level approach to overall lean production and implementation by collision operators for collision operators."

"We still have room for improvement and we continue to learn every day. And with Sherwin-Williams' continued support, we want to continue to improve and get better."

### The takeaway

Similar to Collision King, there are many other success stories of consultants identifying ways to make shops more efficient and profitable. Most impact assessments are custom designed to identify what is holding your collision repair facility back or preventing you from reaching the next level of performance. Upon completion and implementation of the program, most shops see immediate and positive results, including:

- Standardized process and procedures
- Improved work flow and cycle time
- Eliminated waste in multiple shop areas
- Increased revenue and profitability
- Exceeding insurer expectations

See if your paint supplier provides a customized, step-by-step optimization and action plan to address areas of opportunity and partner with you to help implement positive change. These tangible results will help you reduce cycle time, improve on-time delivery and repair quality, and increase revenue and profitability. All this while exceeding the expectations of your customers and insurance partners. 📞



**LEROY RUSH** is the manager of business consulting services with Sherwin-Williams Automotive Finishes.

[leroy.v.rush@sherwin.com](mailto:leroy.v.rush@sherwin.com)



# 2015 Pebble Beach Concours d'Elegance Best in Class & Best of Show



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# WHAT TO LOOK FOR IN A SPOT WELDER

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## TIPS AND INSIGHT TO FIND THE BEST SPOT WELDER FOR YOUR SHOP'S NEEDS

JEFF COPPES //  
Contributing Editor

**W**hen my dad purchased his first personal computer, I remember him saying, "It has a one-megabyte hard drive, more storage than I will ever need." Now, we routinely send media text messages from our phones much larger than that. While changes in

computer technology are extreme, similarly changes in the automotive industry are not far behind. The breakthroughs in building vehicles lighter, more fuel efficient and safer means a whole host of changes for the body shop. Just as that old PC cannot keep up today, expecting your old spot welder to safely repair newer vehicles is also unrealistic. So what has changed and how does that affect the purchase of a new Squeeze Type Resistance Spot Welder (STRSW)?

The basics of resistance spot welding have not changed from Elihu Thompson's original discovery in 1885. When electric current runs through metal

sheets that are tightly clamped together, the inherent resistance to that flow generates heat and creates the weld. The combination of these welding parameters — welding current, weld time and squeeze pressure — creates a molten pool that forms the weld nugget.

With regard to welding parameters, one might assume more is always better, right? Actually, that is not the case. First, consider welding current. Too little current results in no fusion, while too much will overheat newer steels, taking the strength out of the weld. Second, consider squeeze pressure.

Limited pressure will have sparks





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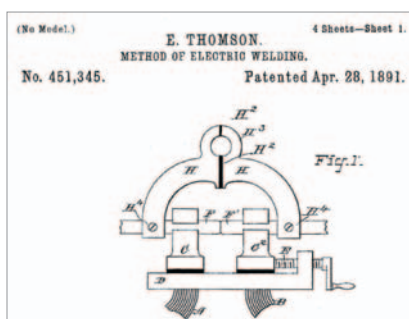
flying everywhere (expulsion); however, too much can limit the size of the weld nugget and excessive pressure reduces resistance, meaning less heat generated. Third, consider weld time. The time and current work together to create the right amount of energy. If you have too little or too much energy, the weld suffers. That total amount of energy varies depending on the thickness and type of material. The three parameters must be combined correctly to create a proper weld. So how do we know the right combination? Welders can learn through practice and experience, and also get some added assistance from a smart welder.

What makes a welder a “smart welder?” At its simplest, we can think of it as fully automatic versus manually setting the weld parameters.

- Manual – Traditional welders have just two dials. The technician sets the welding current and weld duration themselves. Without exact information from the OEM, the technician must perform sample welds and destroy them until they find the correct settings for the material they are welding.

- Semi-automatic – Testing is done and parameters are built into the welder. The technician determines minimal information, usually the material type and thickness, and the welder sets the actual parameters.

- Fully automatic – As part of the weld process, the spot welder determines the material type and thickness itself, then sets all of the parameters for the technician. Thus the concept of “Pull the trigger and weld.”



ELIHU THOMPSON welding patent

In practice, this means when welding a B-Pillar, the smart welder self-adjusts every time the stack up changes. Without this technology, the technician must recognize the change and set the welder manually for the new conditions.

Setting the parameters up front can be limiting. How are you certain the welder did what it was supposed to do? Just like heat can be a problem at the weld, similarly heat builds up in the shop electrical system and the machine itself. That heat then steals energy that is supposed to go into the work pieces. Advanced machines monitor and adjust throughout the weld cycle to ensure the amount of energy needed at the tips is actually delivered. The system then provides feedback on the results of the weld. That feedback can be as simple as red and green LEDs or a full display of the actual measurements. Many newer welders capture this information, logging details about the weld, settings used, results, weld location, etc., then generating a report to accompany the repair paperwork.

“Smart” controls offer advanced features in addition to initially setting the parameters. Features vary by equipment manufacturer, but some of the potential tasks include:

- Checking the welder status prior to welding. Are the electrode tips too dirty to create a good weld? Do you have the proper gap?

- Recognizing material between the layers and adjusting accordingly. Simply put, resistance spot welders are creating an electrical circuit. If there is no connection, there can be no weld. Connection barriers, such as heavy E-coatings, waste energy meant to create the weld to establish the connection. Smart welders, however, recognize this situation and add a pre-pulse to the weld. Typically this is a fixed amount of current and time. More advanced models actually determine when the contamination has been burned through before starting the weld, ensuring all of the energy from the weld



A SPOT-WELD cross section



CTR7 MMI showing weld results

goes into forming the nugget. This will be critical as structural adhesives and repair procedures calling for weld bonding continue to increase.

- Recognizing a shunt. Like water, electricity takes the path of least resistance. In spot welding that means some of the current will flow through the previous spot weld rather than directly between the electrodes. While this helps establish the connection, it also means energy is stolen from forming the nugget. Some systems recognize when a shunt is drawing power away from the weld, adding extra energy to compensate, ensuring the quality of the second weld.

It's also important to consider how heat affects new metals. To create high strength (HSS) and ultra-high strength steels (UHSS), special processes trap extra carbon in the molecules. When repairing the vehicle, if the heating and cooling are not controlled properly, carbon escapes, converting even the UHSS back to mild steel. Changes in the characteristics of the metal mean it will not react as designed in a collision.

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SPOT WELDER gun comparison

When talking about any type of welder, one of the key questions is “how many amps?” How much welding current does it generate at the tips? Most spot welders these days use inverters and require three-phase power. They are converting the incoming 60 Hz AC Main to a DC wave at higher frequencies up to 10,000 Hz. This means they apply the energy much quicker and more efficiently; instead of getting peak current 120 times a second, they are hitting it 10,000 times a second for virtually constant power. To apply the same amount of energy on single phase, you would have to dramatically lengthen the weld time. That is more time for heat to dissipate out into the surrounding steel and a greater risk of destroying its strength.

While considering heat, it is worth mentioning the types of cooling systems:



A CTR12000 welder

air cooled, liquid cooled or a combination. Air-cooled units rely on internal fans and shop air blowing on the cables and electronics to cool, while liquid-cooled welders use a coolant circulation system. Ideally, the welder needs to be cooled everywhere heat is generated. Starting at the weld, electrode caps bring coolant to the back side of the weld. Cables, transformer and power modules all generate heat and therefore require cooling as well. Verify what is being cooled and how. Consider the size of the coolant tank and whether the liquid is actively cooled. It will take much longer to heat up 20 liters of coolant than it does 5 liters. The type of cooling determines the duty cycle you can expect, particularly with the higher current requirements.

Spot welders can be broken into two main categories based upon the location of the transformer. On cable welders, the transformer is larger and located in the base. They have a smaller, lighter gun (welding tong) but require large copper cables to minimize loss of power, typically no longer than 8 feet. Trans-guns house the transformer in the gun itself. Because the transformer is located near the electrodes, it is much smaller and therefore the welding cables are smaller and longer, approximately 20 feet, offering the technician mobility without having to constantly reposition the welder. Trans-gun welders are also more forgiving of poor shop power. There is a trad-

ed-off though — trans-guns are usually heavier than cable guns.

Another shift in the industry comes from increasing OEM program requirements. In an effort to guarantee proper repairs, programs require shops to have correct tools. Some OEMs test welders themselves and publish a list of approved equipment. Other OEMs establish minimum specifications that the welder must meet. Honda recently published a requirement that STRSWs used on 1500 MPa repair parts have a minimum welding current of 9000 Amps and 770lbf squeeze pressure. Consider the vehicles you commonly repair and the programs you work with when choosing a welder.

Another major consideration is where you purchase the equipment. What can you expect for training and support? A body shop is a harsh environment for any type of electronic equipment. What resources are available if you have problems? You need a team you can rely upon just like your customers rely upon you.

As the saying goes, “the only thing constant is change.” The automotive industry and repair procedures change for the better. Make sure the equipment you rely upon is ready to keep up. 📧



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# THE POWER OF POWDER

**POWDER COATINGS ARE** solvent free and require a combination of magnetism and heat to be applied.

## DRY COATINGS KEEP MAKING A CASE FOR A LARGER ROLE IN THE INDUSTRY AND PERHAPS YOUR SHOP

**TIM SRAMCIK** // Contributing Editor

If you've spent much time at car shows, at some point your gaze probably locked on a painted wheel or engine part. Muscular and colorful, tough and functional all at the same time, the finishes produced by powder coatings are truly remarkable, even in an industry where shops churn out dramatic paint jobs as part of their regular duties. They also offer several significant advantages over liquid coatings. They're environmentally safe since they're

solvent free and thus produce no VOCs. They provide significantly better transfer efficiency and are extremely durable when correctly applied.

So why aren't powders part of your business?

Odds are lack of demand plays the largest part. Powder coatings still lag in use behind liquid finishes since they aren't appropriate for most traditional bodywork (more on this later). Also, offering custom work isn't for every shop. But there still are

plenty of reasons for you to familiarize yourself with this technology.

For one, auto manufacturers have increased their use of powder coatings. Eventually this could translate into after-market possibilities, so you'll want to be prepared. Powders also are popular with younger car enthusiasts who might be drawn to collision repairs. Considering the relatively limited labor pool the industry is struggling with, any path that might draw in new blood is worth looking into.

Finally, powder coatings are a revenue-building opportunity, even if a limited one for most shops. These finishes currently are popular with the DIY crowd because they're fairly inexpensive

to apply — a typical investment would include a special baking oven and electrostatic gun. These purchases are well within the means of most shops who also can offer something most DIYers can't — professional experience and training. Hot rod and classic car enthusiasts (along with other customization fans) have proven willing to spend more on their hobby if they get a great value in return. That's exactly what your shop and these finishes can supply.

Here's what you need to know about powder coatings.

### Competing chemistries

Liquid and dry coatings differ chiefly in two areas: preparation and application. Those differences are tied to the unique chemistry of each finish type.

Liquids utilize water, solvent, low-viscosity resins and various other raw materials whose job it is to make the new color coat adhere to the vehicle material. As the coating cures, the solvents and water evaporate on the substrate, having no part in the final color or durability of the finish.

Powder coatings are the products of color particles milled down to a specific size that can hold an electric charge long enough to land on a grounded part. It's the same concept that causes a balloon to stick to a surface after static electricity is built up from friction.

Since liquids provide more adhesive properties, they're far easier



Photo Credit: Byrne Coatings

**OFFERING POWDER COATINGS** can be an effective way of attracting new employees and generating fresh revenue.

to apply. Preparation usually involves standard cleaning and sanding. Powder coatings require far more preparation. Instead of drying, they must melt before fully curing — spreading over a surface as the coating adapts to the substrate. The melting process makes it difficult to create corrosion, adhesion and flexibility properties. These must be built during an extensive pretreatment process that can require multiple steps depending on the type and condition of the substrate material.

### Sample preparation

The following is a standard powder coating preparation process from Powder Pro, a Bedford, Ma., coating facility:

**Step 1:** Use a degreasing product suitable for the material. Note that companies that sell powder coatings typically offer a full line of degreasing and other prep products.

**Step 2:** Remove the old finish using an abrasive blasting process like sand, plas-

tic or glass-bead blasting based on the metal type and the finish to be removed. Plastic blast soft, thin or delicate metals. Sand- or glass-bead blast rust and harder metals, along with tough finishes. Be sure to thoroughly remove all of the old finish and rust, including any clearcoat.

**Step 3:** Dip the part into a chemical cleaner to remove any other contaminants and residue from previous coating processes. Once again, check with your vendor for the appropriate cleaner.

**Step 4:** Hang the part and prebake it in the oven at slightly higher temperatures and slightly longer than the final powdered bake. Doing so produces "outgassing" — the expulsion of any gases remaining in the pores of the metal. This step is necessary to avoid any peeling, blistering or bubbling during the final powdered finish.

**Step 5:** Relocate the part and hang it in a spray booth as soon as it has cooled to prevent dust from becoming attached. Booths are ideally suited for this step since they're electrically grounded. Dust



**POWDER COATINGS ARE APPLIED** with electrostatic spray guns. Invest in one with adjustable kilovolt settings to ensure the best transfer efficiency.

Photo Credit: Gema





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can collect during cooling and inhibit adhesion while producing a noticeably substandard finish.

## Application

Powder is applied using a combination of heat and energy that causes a metal part to attract powder like a magnet. An electrostatic gun gives the powder a positive electric charge, which a grounded part draws to it.

Guns differ from one manufacturer to another. Some professionals prefer models with adjustable KV (Kilovolts) settings. Adjustments allow painters to spray more accurately and with the appropriate thickness.

Higher KV settings, for example, provide better transfer efficiency; more powder adheres to the part instead of becoming over spray (which can be collected later and reused). Note, however, that higher settings may not be right for every job and can create a defect called back ionization that appears as tiny dimples.

A lower KV is better for more complex parts, namely those with hard-to-reach areas such as sharp angles or deep recesses referred to as Faraday areas. The professionals from *Powder Coating: The Complete Guide* recommend a 50KV setting average for applying first coats on most parts. They also recommend the



Photo Credit: PPG

**PARTS BEING POWDER COATED** need to be stored in a booth after preheating to protect them from attracting dust.

following application guidelines:

- When having trouble getting powder into an area, reduce the KV.
- When spraying a second coat, always turn the KV down to 20 or 30 to permit easier attraction between the powder and part.
- Complete most powder coating jobs with the 25KV setting, and lower it to 15KV when spraying second coats or Faraday areas.
- Before spraying, examine the part and map out a course that will allow you to spray Faraday areas first and then move

onto the flatter areas of the part. Keep in mind that as a part is covered in powder, a charge will build up, making the Faraday areas even more difficult to spray.

- Begin by spraying the powder coating away from the part until you create an even, non-sputtering cloud (this should only take a second or so). Next, move the gun to the part, keeping the trigger pressed while spraying

until the entire part is covered fully. Try to achieve full coverage with a single pass. Spray with a slow, controlled motion throughout the part, maintaining a distance of 6 to 8 inches.

- Confirm that you have full coverage by going over the whole part with a bright LED flashlight. Some painters prefer to keep the flashlight pointed at the part during application. Doing so reveals any areas where bare metal may still be showing. Touch up these areas before curing the part.

## Curing

When the proper amount of powder has been applied, bake the part at about 375-400 degrees for 15-20 minutes. This may take longer based on the oven model and powder, with some manufacturers recommending a full 30 minutes of baking. The extreme heat makes powder coating currently impractical for many parts, and traditional repairs, since it can damage rubber, plastic, electrical components and other materials and pieces.

Once the baking time ends, remove the part from the oven and allow it to cool. Professionals suggest performing an additional quality check. Using a Mil



Photo Credit: Wisconsin Oven

**POWDER COATINGS MUST CURE IN OVENS** at temperatures around 400 degrees F. This can make them impractical for traditional collision finishing.



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Thickness Gauge, check the coating thickness over the entire part. Recommended mil thickness usually ranges between 2.0 to 3.0 mils. If any section of the part falls below that range or exceeds it, you may need to consider re-coating the part. One of the downsides of powder coatings is that they can't be touched up. Any re-dos have to be completely reworked.

Some practice will be necessary before your painters regularly produce the correct thickness. Have your employees produce a number of practice pieces they can measure afterwards to determine where they need to improve to deliver consistent results.


### Final considerations

If applying powders feels like a good fit for your shop, there are some additional factors you'll need to keep in mind. Perhaps the most significant is adding a service that can affect schedules in your

paint department. Prep workers probably will need to invest significant time. Booth time will need to be set aside. Depending on the amount of powder that doesn't adhere during spraying, workers also will have to invest work time in cleanup and recovering powder for reuse. Even with the number of colors available, it can be challenging to match metallic colors.

In addition, if you perform a lot of powder services, you might see significantly higher utility bills from heavy use of the oven. Note too that powder coatings have a number of other commercial applications. Any material, including wood, that can withstand 400 degree F baking temperatures can be powder coated. Motorcycle and bicycle frames are popular choices, as are barbecue grills, kitchen appliances, propane tanks, chain saws, address signs and tool boxes. There are numerous other possibilities,

so depending on how well you market your services, you could be quite busy.

These factors can add up to rising costs your powder services will need to absorb. Throw in the fact that you could be competing with businesses dedicated solely to applying powders and suddenly offering this service might not seem so attractive. There's much to be taken into consideration. The good news is you have time to do research and work through a business plan. Should you move forward with a powder operation, you'll be investing in a business with plenty of potential and possibilities that much of the rest of the auto industry is embracing. 



**TIM SRANCIK** has written for *ABRN* and sister publications *Motor Age* and *Aftermarket Business World* for more than a decade. [tsrancik@yahoo.com](mailto:tsrancik@yahoo.com)



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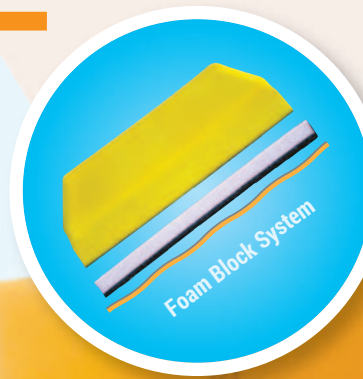
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[WWW.AXALTA.US](http://WWW.AXALTA.US)



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[WWW.PPGREFINISH.COM](http://WWW.PPGREFINISH.COM)



## FAN DECKS

Axalta launched new fan deck systems for its Spies Hecker® Permacron® 293/295 Series and Standox® Standocryl® Basecoat paint systems. Paint chip size, organization, housing and the cover of each fan deck system were redesigned to make it easier than ever to choose the best starting point for color matching. Each chip provides a real-life representation of the product as it looks when applied at your facility.

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# PAINT & REFINISHING

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[WWW.BLOWTHERM-USA.COM](http://WWW.BLOWTHERM-USA.COM)

## SURFACE PREPARATION SYSTEM

Mirka's Optimized surface preparation (OSP) system maximizes the performance of every individual phase of the repair process. The OSP system is marked with numbers providing which disc or strip should be used for each step during the repair. This provides consistency within all shops, meaning less time spent on repairs, resulting in more repairs and more profit.



[WWW.MIRKA.COM](http://WWW.MIRKA.COM)

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The Ultra 7000<sup>®</sup> Refinish System from Sherwin-Williams Automotive Finishes is a productive, efficient, and consistent paint system. With repeatable performance, efficient processes and products that can assist in decreasing cycle times, the Ultra 7000 system is the most productive refinish system in the market. All of these features plus the promise of continued investment are the reasons it is preferred by industry-leading collision repair facilities.



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# PAINT & REFINISHING

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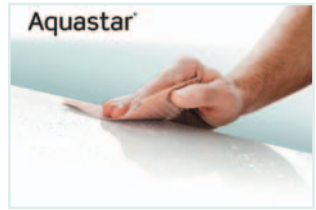
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# GREENER THAN GREEN

**PPG SAYS** its SG undercoat system can help shops replicate the growing number of OEM finishes.

PHOTO CREDIT: PPG

## WATERBORNE FINISHES ADD NEW WAYS TO MAKE SHOPS CLEANER AND MORE PROFITABLE

**TIM SRAMCIK** // Contributing Editor

Is another article on waterborne really necessary?

Once you noticed the subject of this article, there's a pretty good chance that was your first reaction. It's an understandable response in an industry that has been awash in waterborne news and updates, along with a steady stream of technical updates, for more than a decade. If your shop has

converted to these low-VOC finishes and already is experiencing the benefits of waterborne, one more article can seem redundant or flat-out overkill. How much more does a repairer need to know?

Actually, plenty.

The waterborne finishes that first hit the collision market en masse during the beginning of the current millennium were just the opening salvo from paint

manufacturers looking to combine eco-responsibility with superior product quality and ease of use. Now that waterbornes have proven their value, manufacturers have been building on their success by gearing up a new generation of green, high-performance products that complement waterbornes and offer environmental (and other) benefits of their own. Manufacturers also have created new lines of waterborne finishes and ramped up efforts to make color-matching errorless and simple.

Still think there's nothing new in the world of waterborne? Whether you're looking to upgrade your current stock or

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\*Not all products displayed come with cart system

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interested in what the rest of the market has to offer, now is a terrific time to update your knowledge of just what waterborne products and technologies could be doing for your business today and in the very near future.

Here's a look at the products and tools that could be making your shop greener, leaner and more profitable today.

**Faster finishes minus the energy**

One of the greatest benefits of waterborne finishes has been economical.

They require less product to produce the same finish as solvent-based products. Manufacturers have added to these savings with finishes and processes that significantly cut paint booth time, in some cases practically eliminating it. This means lower energy bills, a smaller carbon footprint and faster throughput.

Sherwin-Williams Automotive Finishes' (SWAF) AWX Performance Plus Waterborne Refinish System promises to provide color match with one to three coats for full hiding — a significant reduction in materials compared to previous generations of industry products.

When used in tandem with SWAF's new HP Process Refinish System, which features air-dry primers and clearcoats, AWX System finishes



PHOTO CREDIT: SWAF

**WANT TO CUT YOUR POWER BILL?**

Companies like Sherwin-Williams Automotive Finishes have created products that dry without turning your booth heat on.

can be sanded or polished after only 15 minutes at 75 degrees. This allows a technician to go from priming to finishing in 50 minutes or less without turning on the heat in a booth.

SWAF further states that the HP Process Refinish System with air-dry technology enables technicians to complete category 1 and 2 repairs — which tackle 1 to 3 panels — in 50 minutes or less. Because finishes can be completed well within a day, SWAF touts the systems as offering "zero-day" repairs.

PAINT COMPANY ONLINE RESOURCES	
Company	Website
AkzoNobel	www.akzonobel.com
Axalta	www.axaltacs.com/us
BASF	www.refinish.basf.us
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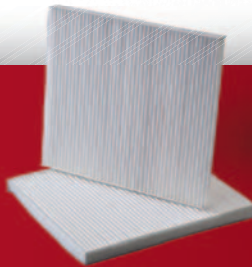
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All this translates into reduced cycle times and the opportunity to bring in plenty of new repair jobs. SWAF says AWX is ideally suited for high-volume collision centers, though the company also is quick to note that shops of any size can benefit from reduced costs and boosts in efficiency.

Axalta meanwhile offers 1.5-coat, wet-on-wet application with its Cromax Pro, Standox Standoblue and Spies Hecker Hi-TEC waterborne lines. The company says these products eliminate four steps from the usual repair process while providing full repair-area coverage in a single application using up to 25 percent less paint.

Interested in waterborne but still more comfortable with solventborne finishes? Michael Carroll, new products introduction manager for BASF, says his company has you covered. BASF continues to offer its ONYX HD system as either a traditional waterborne or as a solventborne basecoat. The solventborne system also is low VOC. Carroll says all ONYX HD products dry very quickly in all colors and in all body shop environments.

Axalta's low-VOC solventborne solution, Cromax Max, is designed to allow shops to transition to low-VOC solutions with minimal impact on their current operations. Cromax Max requires no new equipment, new spray techniques or new processes. Axalta also says its price is consistent with solventborne basecoats that most shops spray in National Rule-regulated areas.



PHOTO CREDIT: PPG

**NEW TECHNOLOGIES ARE** making waterborne color matching easier and more accurate.

## Supporting waterborne

PPG has put its mark on waterborne-related products with waterborne speed primers EPW115 and Aquabase, along with waterborne primer surfacer P950-5505. As 1k alternatives to traditional 2K surfacers (requiring catalysts), PPG says they reduce cycle time, provide corrosion resistance and improve adhesion performance. Each is designed to air dry quickly and be ready for sanding in 30 minutes.

PPG Waterborne Segment Manager Tim Jones says the company's latest green step has been expanding its line of resins, including those used in products like EC530 En-V clearcoat, which is engineered specifically to go over waterborne basecoats. Jones says the highly specialized resins allow repairers to apply them in multiple temperature and humidity levels with no loss of performance. This means they can work in all areas of the country with minimal restrictions, bringing an extra level of waterborne performance and ease of use to shops everywhere.

BASF recently released eight high-strength Base Boosters for its Glasurit 90 Line. Carroll says the boosters allow painters to achieve quicker basecoat coverage and use less material, with some reporting 1-2 fewer coats and an average of 30 percent less applied material. Carroll adds that the product flashes the basecoat faster while providing a "much more robust, drier feel."

## More accurate matching

Of course, waterborne loses many of its benefits (just as solventbased finishes would)



PHOTO CREDIT: SWAF

**GET THE MOST FROM YOUR** waterborne investment by researching and utilizing the host of other finishing products available designed to complement low-VOC basecoats.

if shops fail to correctly color match a finish the first time. Manufacturers are answering this problem with new training and technology that helps ensure shops can accurately match colors, with a special eye on the ever-growing palette of colors being offered by OEMs.

Jones says PPG has begun training painters how to duplicate translucent colors. This is no easy task since OEMs don't all use the same application process to get the same effect. For example, some use standard gray undercoats for all colors. Others utilize different shades of gray; still others apply colored ground coats. Yet with all these different approaches, the result is essentially the same — undercoat and clearcoat combine with the "translucent nature" of the intense color pigments to create the final color.

PPG believes the best way to mimic the various OEM processes, while producing the same results, is with a spectral gray (SG) process that incorporates waterborne toners and translucent pigments with an SG undercoat system. The SG undercoat contributes to the final basecoat color to duplicate the factory finish. PPG's process utilizes five formulated shades of spectral grays — G 1, 3, 5, 6 and 7 — to help shops match the full range of translucent colors in use and those that are emerging. The process also ties into PPG's color formula retrieval tools that specify the optimal SG shade of undercoat for



each waterborne color formula.

SWAF has updated its color matching tools with a system aimed at simplifying color selection with greater accuracy using a methodology that helps to more efficiently determine what the most likely color match is. The FormulaExpress 2.0 Color Retrieval System allows shops to enter whatever they know about the vehicle into one box (which can be a sharp departure from other systems requiring specific information such as color chip, formula code and color code). FormulaExpress 2.0 is then engineered to intuitively sort formulas by popularity instead of the "standard with alternates" method.

SWAF says its process helps locate the right formula much more quickly. Accuracy is further improved, says the company, with a Color Filter feature that helps painters select from a list of color variations using a limited, simple set of filters designed to be user friendly. To ensure shops have convenient access

to FormulaExpress 2.0, the system works with multi-platforms including tablets, smartphones and PCs.

### Moving down the road

Considering the strides waterborne and low-VOC finishes and products have made in such a short span of time, and their impact on the industry, the logical question at this point is, "What's next?" What's next might very well be what's on the market today or being announced in the near future, for example, at NACE 2016.

Interestingly, one of the significant steps waterborne still needs to make is getting more buy in from the industry at large. Manufacturers say thousands of shops — for a variety of reasons — still haven't converted. That's a shame since these repairers essentially are cruising in the slow lane while the rest of the industry is passing them by. They're also missing out on very real opportunities to make more revenue, grow their busi-

nesses and keep their employees and communities cleaner and safer. The paint manufacturers *ABRN* spoke to stressed that their focus is to continue making waterborne the cleanest, most economically attractive and best quality finishing option available.

For those of you who have gotten on board with this technology, congratulations on a smart choice. Now's the time to make sure low-VOC products are doing all they can for your shop. Put in some research, and give your vendor (and maybe some competitors) a call. ☒



**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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[WWW.MOTORGUARD.COM](http://WWW.MOTORGUARD.COM)



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At nearly 1/3 the cost of a permanent wall, Goff's Curtain Walls help contain dust, dirt, grinding sparks and noise while separating and maximizing usable shop space. Custom manufactured with fire-resistant vinyl and a 16g. track and roller system, Goff's Curtain Walls are the flexible, durable solution to separating wash bays, prep stations and painting areas.

[WWW.GOFFSCURTAINWALLS.COM/ABRN](http://WWW.GOFFSCURTAINWALLS.COM/ABRN)



## BODY FILLER

ITW Evercoat announces the launch of Evercoat Commercial Ultra™ Body Filler, which has been developed to meet the needs of large industrial and commercial vehicle manufacturers including ambulance, fire truck, bus and train manufacturers.

Evercoat Commercial Ultra Body Filler has been formulated to have a 10-minute work time and can be sanded in 30 minutes, allowing technicians to mix, spread and work large quantities of body filler at one time.

[WWW.EVERCOAT.COM](http://WWW.EVERCOAT.COM)



## SCRATCH KIT

3M Auto has introduced its new Trizact™ Precision Scratch Kit with new restorative abrasive technology that ensures quality results with less time and effort. Utilizing the power of microreplication, Trizact's unique pyramid-shaped structures contain multiple layers of abrasive minerals that produce easier and finer results for scratched and scuffed surfaces, without the fear of inaccuracy.

[WWW.3M.COM](http://WWW.3M.COM)



## COLD WATER PRESSURE WASHER

Mi-T-M Corporation announces the release of the new 7000 PSI CWC cold water pressure washer to the CWC Premium Series line. This new model is ideal for any heavy-duty cleaning in a variety of industries. The new unit features 7000 PSI at 3.8 GPM, a 688cc Honda OHV engine with electric start, external bypass system to protect from heat build-up, two-piece belt guard for easy access to components and a 13-gallon fuel tank capacity for a 9 1/2 hour maximum run time.

[WWW.MITM.COM](http://WWW.MITM.COM)



## ALUMINUM WELD STATION

Pro Spot's newest design of the Mobile Weld Station, Kit 3, will satisfy all your aluminum repair needs. The MWS-AL-K3 includes the Aluminum Weld Station with an SP-1 Pulse MIG Welder, PR-111 Inverter Plasma Cutter and a built-in Fume Extractor. There is also an additional add-on option PR-5 Self-Piercing Riveter.

[WWW.PROSPOT.COM](http://WWW.PROSPOT.COM)



## NITROGEN WELDING SYSTEM

Polyvance's new 6071 Bumpersmith 2.0 is a nitrogen welding system combined with a bumper repair workstation that makes it easy to support a bumper in just about any orientation so that one technician can singlehandedly repair it. The Bumpersmith 2.0 is unique in that it has a nitrogen trigger in the handle, which saves the nitrogen gas for use only when welding.

[WWW.POLYVANCE.COM](http://WWW.POLYVANCE.COM)



## AIR COMPRESSORS

BendPak's V-Max Elite series of air compressors feature the rugged V-Max extreme-duty, four-cylinder pump designed and manufactured to operate with maximum efficiency under all load conditions. These rugged two-stage lubricated, reciprocating compressors with 100 percent cast-iron pumps provide the quality and performance needed for heavy-use applications like automotive and body repair.

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# The manufacturer knows best

Are you following OEM repair recommendations? If not, you are rolling the dice.

**L**et's talk briefly about your health for a moment, shall we? A persistent cough has forced you to visit your physician, who, after careful examination, looks at you and states, "My recommendation for you is to quit smoking or you'll have further health risks in the future."

On the drive home, you ponder that recommendation. "If I follow my doc's orders, I'll probably start feeling better," you think to yourself. "Or I can keep smoking and take my chances." Sounds like a silly argument, doesn't it?

Well, that's precisely the argument that's being played out in the collision repair industry these days. And it centers on manufacturer recommendations for properly repairing a vehicle.

It's a simple two-sided argument. On one side, you've got the manufacturer recommending the right parts, equipment, tooling and procedures for a specific repair on a specific vehicle. Those recommendations were formulated by the manufacturer in an effort to have the highest probability that the vehicle will look, feel and perform as designed.

On the other side, you've got an effort to reduce costs of the claim and still have an acceptable repair done to the vehicle. Controlling costs associated with a loss is surely important, but at what point are we putting what the customer is entitled to in jeopardy by not following manufacturer recommendations? And aren't we really rolling the dice with regard to fit, functionality and the value of the vehicle?

The latter argument, my friends, is what we commonly look at as the dice roll. The fact is that you really can't predict the long-term effects of procedures that fall outside those recommended by the manufacturer, nor can you determine the history or functionality of alternative parts selections.

But by not adhering to OEM recommendations, you're rolling the dice on a lot more than just the integrity of a repair part. You're throwing caution to the wind on virtually every facet of the repair process, including the part where your customer ultimately climbs back into that vehicle and assesses your work. (Or worse yet, when your work needs to stand up to a second crash involving the repaired area.)



**CONTROLLING COSTS ASSOCIATED WITH A LOSS IS SURELY IMPORTANT, BUT AT WHAT POINT ARE WE PUTTING WHAT THE CUSTOMER IS ENTITLED TO IN JEOPARDY?**


We all know that the main issue guiding this timeless argument has to do with costs and control. Insurance companies want viable, economical solutions. Adjusters are constantly under the gun to meet company metrics. But when it comes down to knowing what all must be done in order to correctly repair a vehicle, who is the true expert here?

As professionals, why would we want to challenge OEM recommendations when those suggestions are formulated to return the vehicle as close to its original pre-loss condition as possible? Why would we use anything other than OE parts that fit properly, function properly and reduce wasted time? Why would we work outside of the recommended OEM repair procedures when those steps are designed to ensure that the vehicle's systems respond accordingly and parts perform properly in the event of a future accident?

As shop owners we have a lot of things riding on our work. But when the issue of comparing OEM recommendations versus non-OEM arises, the only question we really need to ask regarding the repair of that vehicle is, "Doesn't the customer deserve to be made whole after a loss when it comes

to safety, fit and functionality of their vehicle?" The question of whether or not another procedure or part selection has worked in other scenarios is irrelevant if you grasp the responsibility a repairer takes on to assure that the vehicle is restored to pre-loss functionality and fit.

In the end, it comes down to safeguards. OEM recommendations are designed to provide assurance that the vehicle owner is ultimately protected using the proper parts and procedures that ensure adequate performance of the vehicle's safety systems in the unfortunate event of a future accident, while maintaining a high level of intended value for the vehicle.

So do you quit smoking, like your doctor recommended? Or do you roll the dice and keep lighting up? In the end, your body will be the judge. 

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**MICHAEL GIARRIZZO, JR.** is founder and president of DCR Systems ([www.DCRsystems.net](http://www.DCRsystems.net)) and a pioneer in the utilization of lean production principles on the shop floor. Questions or comments can be sent to Michael at [mgjarrizzo@dcrsystems.net](mailto:mgjarrizzo@dcrsystems.net)



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