Nuts and bolts, tips and tricks from our resident industry experts.

BY LARRY MONTANEZ III, CDA & JEFF LANGE, PE

WHAT THE FUTURE HOLDS FOR YOU

Wow.

So far this year, we have heard of carbon-fiber-reinforced plastic (CFRP) vehicles (BMW i3) and a mass-produced aluminum truck (2015 Ford F-150). But what does the future hold for the collision repair industry? This month's article contains a recap of the known information and facts, some predictions and even a few myths we'd like to dispel.

NEW MATERIALS

Fact: Modern vehicles are not only engineering wonders, but they are loaded with creature comforts and are rolling, electronically-controlled masterpieces. And this is just a taste of what is to come.

Prediction: In the next five to seven years, we will see newer, more advanced high-strength steels (ADHSS), CFRP with nanotechnology, semi-autonomous vehicles, equipment changes and advanced training requirements.

Myth: Today's vehicles can be repaired both quickly and properly. FALSE! Today's vehicles require skill, training and proper equipment to ensure that the repairer is adhering to proper procedures and protocols. On too many occasions, we see unrealistic repair times (commonly referred to as "cycle time"), generally based on rental day calculations without taking into consideration the actual skill level required to perform proper repairs. Remember: Just because you've been doing it a certain way for a period of years does not mean it is right.

ALUMINUM

Fact: Aluminum construction is moving into mainstream vehicles. Over the past few years, we have seen mass-produced vehicles with aluminum outer panels and closure panels. Infiniti and many other OEMs are offering their vehicles with aluminum door assemblies and hood panels. The Nissan Altima now has an aluminum hood, decklid and roof panel. Ford has been making headlines over the 2015 F-150. GM has also announced plans to offer a 1500 Series pickup by 2018 that will be aluminum-intensive.

Prediction: Ford Mustang, Fusion and Expedition will be next to go aluminum. GM will roll out the 1500 Series pickup and SUV lines soon. After that, we predict a couple of Cadillac models. Chrysler may wait on the sidelines for a while, but look for the Ram to be the first to go with aluminum. Mercedes-Benz already offers the AMG SLS and the SL as aluminum-intensive; this year, the S Class went aluminum in the front structure. And we already know all Benz vehicles will be designed with aluminum front structures by 2020.

Myth: Aluminum repair is easy and no big deal. FALSE! Aluminum repair is not difficult *if* the technician has the proper training and lots of practice. Aluminum repair is very different from steel; surprisingly, most aluminum damage is not repairable. And we are just talking about outer panels, as structural aluminum components are not repairable and structural realignment is generally prohibited.

EQUIPMENT

Fact: Equipment upgrades and changes are part of the industry, but in the past three years, many OEMs have been making requirements to specific equipment for repairs to their vehicles. Celette has been the leader for structural repair for many years as the most approved equipment for many of the European vehicles. But in recent years, they have been making fixtures for domestic and Asian models. Not too long ago, Doug Craig from Chrysler made a video on the importance of additional anchoring on some Chrysler and Jeep models. CarBench has been the approved equipment supplier for Ferrari and Lamborghini for many years and, in the past few years, has received approval from many of the European automakers. Rounding out the top three is Car-O-Liner, with approval for most of the European models (except Mercedes-Benz USA). If your structural repair equipment was not purchased in the past three to five years, you may not be able to repair most of today's vehicles properly – or, for that matter, any of them.

Prediction: Shop closures are inevitable as the requirements and costs to repair the new advanced vehicles rise. We feel we will see about a 20-percent drop in registered repair facilities in the next decade, with some MSOs, DRPs and OEM-certified repair facilities surviving the costs of training and retooling. Training, certification (ISO, ASE) and an attitude to want to learn and change are, and will be, must-have traits to be successful. Our advice is to start preparing, investing and training now or be left sitting on the sidelines.

Myth: Here is something we hear all the time: "My frame equipment from 20 years ago is still good and my techs know what they are doing." You are in denial. Many techs and damage assessors have a multitude of excuses for why they don't train and get educated to adapt to the new repair procedures. Repair facility owners need to hold people – including themselves – accountable.

HAND TOOLS AND CONSUMABLES

Fact: Hand tools, cutting tools and other consumables will need to change as the materials used in vehicle construction become more advanced. There are about four different strengths of spot weld drill bits available for the different types of steels. Most will last 300 to 700 welds, provided the tech uses the proper speed (RPM) drill and lubricates the area. Bits used for aluminum will last even longer than 700 spot welds due to aluminum's softness. Conversely, boron alloyed drill bits will only last 90 to 125 spot welds, and those bits can range between $75 to $125 per bit. In some cases, you will need two to three bits depending on the amount of spot welds and/or drill holes you will need to drill on boron alloyed or hot stamped steel.

When removing damaged panels for replacement, the tech must be careful not to

cause damage to the inner reinforcements or inner panel (steel and/or aluminum). Techs must use care to drill only the outer panel and then use a panel separator with a hammer. Air chisels are a thing of the past and should not even be in a modern repair facility. Dressing welds should be attempted with quarter-inch thick grinding stones and not cut-off wheels. Twenty-four/36-grit is another antiquated product; after the grinding stone, the tech should continue to dress the area with 50-grit or a belt sander and progress to 80- and 100-grit and/or a Roloc Bristle. In some cases, a Dremel tool will be needed. Shockingly, most techs need a class on how to dress welded areas properly. ***Prediction***: Techs will need to invest in their hand tools, and shop owners will need to purchase newer consumables. Remember: Everyone is watching the quality of repairs. There are articles and videos all over the Internet on post-repair inspection, diminished value and lawsuits about poor repairs. The consumer is asking for this, and the people who are looking are often experts. If you don't raise your quality, you will see more and more issues with the quality of repairs. This could directly affect you and your business.

In general, if your equipment has not been purchased within the past five years, your techs have not been to some kind of training in five years or your techs have never been tested on welding and everything we mentioned above is foreign and unbelievable, then you may need assistance in deciding what you want to do for a living in the future.

We hope this article has helped the industry to better understand what the future holds. Remember that today's advanced construction and material vehicles will not let you repair them incorrectly. Improper repairs will break and fail if repaired incorrectly. Be proactive; protect yourself through education and training.

Feel free to contact us if you have any questions. **H&D**

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Executive Director's Thoughts

Larry and Jeff hit it on the head with this – or maybe hit *you* over the head. It's here, folks. Aluminum is not going to go away, no matter how deep you bury your sore head. Get over it and get with it, or get out. You have no right to fix these cars if you didn't earn the education - and the privilege - to do so.

- Jordan Hendler