



TECHNICAL FEATURE

WE ARE MEANT TO EVOLVE: WHY YOU CAN'T INSTALL USED WELD-ON COMPONENTS

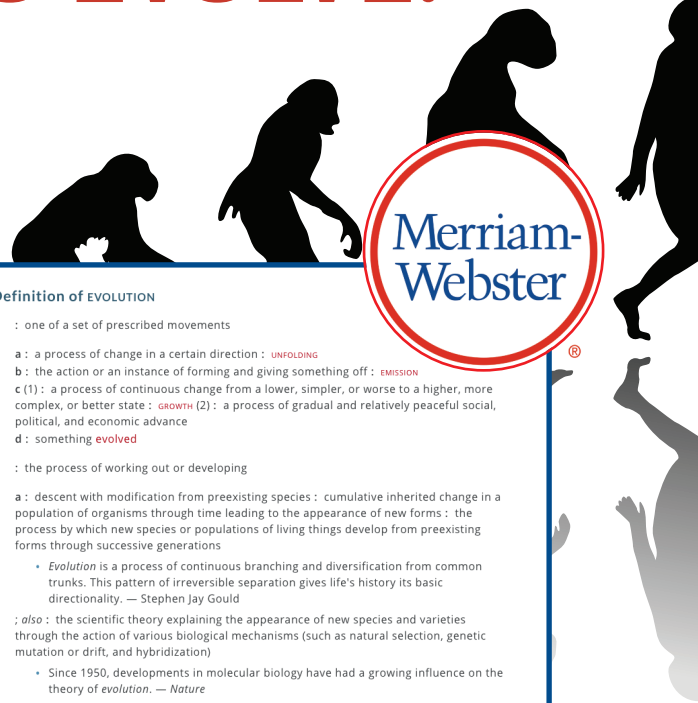
PART 1 OF 2

A lot of things in life grow old and get replaced by something newer and better. Horse-drawn stagecoaches, steam locomotives, prop planes, wooden ships, leaded gasoline, candles, outhouses, typewriters, 8-track cassettes, vinyl records, the Microsoft MS-DOS operating system...the list can go on. We are meant to evolve and advance, but with many in the collision repair industry, there is a major epidemic of regression – not progression. This is not only infecting this profession, but it is also putting people's lives at risk.

Many repair facility personnel are unaware of the actual insurance rules and regulations (and even what their own rules are and who governs them in their industry), and they also often ignore OEM repair procedures. On top of that, there is a lack of education about metallurgical properties and engineering principles, which is leading to the improper use of junk parts, imitation knockoff parts and incorrect joining methods. Many think that welding on a used section of the vehicle is the easiest and best way to preserve the factory welds. However, that would benefit the repair by only 15 percent; there would be an adverse effect of 85 percent. Welding sections of a vehicle onto a damaged vehicle will generally require making up new sectioning locations and/or using the current sectioning locations (but cutting access "windows" into panels to be able to section and weld-in the advanced inner steel reinforcing panels). Most of the inner panels on late-model vehicles cannot be sectioned due to the type of substrate used, which is generally Martensite/Quenched/Hot Formed and Stamped or Boron Alloyed Steels. Cutting and heating of these advanced substrates is prohibited, as it causes too much work hardening and will make the joined area weaker.

When removing components off a junk section, many times you will be required to drill bigger than 8mm holes to separate the panels. This will cause issues when attempting to MAG plug the junk panel onto the existing structure. Although some OEM panel mating flange designs will allow access to the backside of the flange to drill out the factory spot welds (from the opposite side), to remove the junkyard part from the junkyard section, it will be extremely difficult to remove all the spot welds from the backside. As such, most of the spot welds will have to be drilled on the front side of the component flange. This would force the facility to now MAG plug the panel on.

Additionally, most OEMs want STRSW used to reattach panels, which will create two issues: The drilled holes may now be too big in



Definition of EVOLUTION

- 1 : one of a set of prescribed movements
- 2 a : a process of change in a certain direction : **UNFOLDING**
b : the action or an instance of forming and giving something off : **EMISSION**
c (1) : a process of continuous change from a lower, simpler, or worse to a higher, more complex, or better state : **GROWTH** (2) : a process of gradual and relatively peaceful social, political, and economic advance
d : something **evolved**
- 3 : the process of working out or developing
- 4 a : descent with modification from preexisting species : cumulative inherited change in a population of organisms through time leading to the appearance of new forms : the process by which new species or populations of living things develop from preexisting forms through successive generations
 - *Evolution* is a process of continuous branching and diversification from common trunks. This pattern of irreversible separation gives life's history its basic directionality. — Stephen Jay Gould

; also : the scientific theory explaining the appearance of new species and varieties through the action of various biological mechanisms (such as natural selection, genetic mutation or drift, and hybridization)

 - Since 1950, developments in molecular biology have had a growing influence on the theory of *evolution*. — *Nature*
 - In Darwinian *evolution*, the basic mechanism is genetic mutation, followed by selection of the organisms most likely to survive. — Pamela Weintraub

b : the historical development of a biological group (such as a race or species) : **PHYLOGENY**
- 5 : the extraction of a mathematical root
- 6 : a process in which the whole universe is a progression of interrelated phenomena

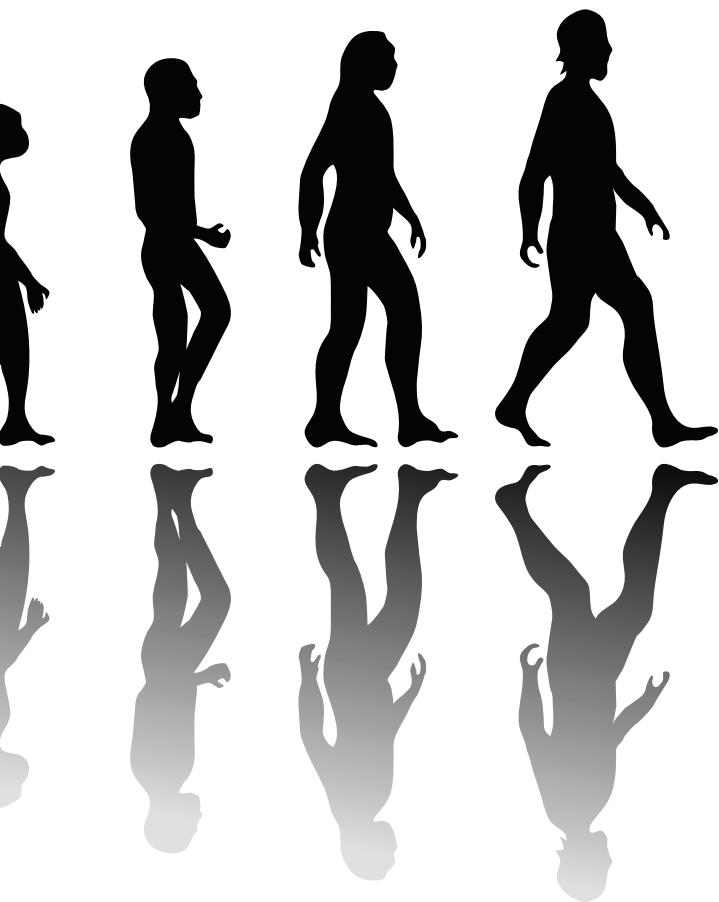
diameter for MAG plug welds, and obviously there are holes in the panel. Some OEMs require some areas of the panel (or the entire thing) to be reattached using weld bonding, which would be impossible once holes are drilled. Another consideration is that many OEMs utilize bonding adhesive in various areas (such as the quarter panel wheel opening well, lower pillar to rocker panel and rear body to quarter panel areas), and removing the outer from inner panels in these areas would be extremely difficult without causing distortion to the outer panel in the bonded areas. Additionally, most quarter panel wheel flanges are now hemmed, making it almost impossible to open the hem without distorting the outer panel.

When a seasoned bodyman decides to cut a vehicle at a certain area based only on their own opinion and not fact-based research, they not only have put their own liability at risk, but they do the same to the repair facility, the estimator and anyone else at the facility involved in the claim – not to mention the lives of the occupants in that vehicle and anyone else driving next to it. You know who isn't liable? That's right – the insurance company or adjuster. They are not the repair professional. This would also be true for DRP agreements.

There are too many people involved in the industry who are of the opinion that there is nothing wrong with using used weld-on



BY LARRY MONTANEZ III, CDA



components or even full-body sectioning (a.k.a. "CLIPPING"). I love the posts online by junkyard sales representatives who attempt to make up reasons why their part is more economical, practical and environmentally friendly. When I hit them with specific questions, they act like Keyser Söze in the movie *The Usual Suspects* – "Poof!" They stop commenting. Are there viable used parts that can be reused on vehicles? Sure! The law stipulates that vehicle owners/consumers have cost-efficient alternatives to new OEM components, but the repair facility must follow the OEM guidelines to protect its liability. If someone chooses to fix their own vehicle and wants to weld two halves of vehicles together, then they can knock themselves out.

Based on I-CAR statistics, only about 60 percent of the industry is trained to weld. Now, that number drops dramatically when we factor in that those are the techs I-CAR *knows about*. Now, consider that out of 100 techs, only 60 are actually trained and only 30 of the trained techs can actually weld. Resistance welders are still not all that common in shops, but when you do find a STRSW in a facility, I see poor maintenance and unacceptable electrode tips 80 percent of the time.

Evidence suggests that the lack of equipment (owner), poor maintenance (owner and techs), and a lack of proper welding training



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and practice (owner and tech) – added to adjusters and shop *guesstimators* who just don't understand what is needed to repair a vehicle properly – are causing an epidemic of incorrect repairs. This is seen all over social media. This has also created a massive amount of so-called "post-repair inspection" experts and *clownsultants* (oops, consultants) who pontificate to whoever will listen to them but are contributing to vehicles being brought back. To be honest, my mom or even Stevie Wonder could see the poor repairs to most of these vehicles. Why is this happening, you ask? It is mainly due to facility owners not holding their estimators or technicians accountable.

The only one who can authorize, approve or even allow you to do repairs to the vehicle is *the vehicle owner*. The only person who has ever paid you for repairs to the vehicle is *the vehicle owner*. You never ever have to use knockoff, imitation or junkyard parts unless you actually agree with the vehicle owner's request. Also, you always have the option to say, "Hey, I wish you the best, but please take your vehicle someplace else."

Not only have we witnessed junkyard parts poorly welded onto the vehicle structures, but in many of the photos I see on social media, there are vehicles being repaired without being anchored to a bench and without a measuring system and/or any supporting braces. Everything is being performed by eye. Over the years of performing accident reconstruction and reviewing questionable safety issue inspections of repaired vehicles, I have seen multiple cases of incorrect MAG welding. I've encountered issues such as (but not limited to) incomplete plug welds, incomplete weld fusion (plug welds not completely filled), excessive heating (large heat rings, distortion and bluing of the substrate in the weld zone), lack of penetration (welds were destructively tested with little to no resistance), welding electrode wire sticking through (indicates burn through and/or porous welds) and incomplete fusion of resistance welds (poorly maintained tips, lack of pressure and/or lack of amperage).

"Okay, okay. We hear you, Larry. Let's say the technician is well-trained and can perform proper welds, and all the equipment is in top shape and the most advanced. In this case, why can't we use salvage components?"

Okay, good question – and I'll answer it next month in Part 2 of this feature.

H&D

Larry Montanez, CDA is co-owner of P&L Consultants with Peter Pratti Jr. P&L Consultants works with collision repair shops on estimating, production and proper repair procedures. P&L conducts repair workshops on MIG & Resistance Welding, Measuring for Estimating and Advanced Estimating Skills. P&L also conducts investigations for insurers and repair shops for improper repairs, collision reparability and estimating issues. Larry is ISO 9606-2 Certified for Audi and Mercedes-Benz and is a certified technician for multiple OEM Collision Repair Programs. P&L can be reached by contacting Larry at (718) 891-4018 (office), (917) 860-3588 (cell) or info@PnLEstimology.com.

Executive Director's Thoughts

Larry always goes straight to the point, which is why we have such appreciation for him. He keeps us looking at ourselves and asking these tough questions. If we're meant to evolve, which part of the spectrum are you? You know what Darwin has to say about those who do not evolve. -Jordan Hendler