

# Scientia Potentia Est Redux

Knowledge is power...  
especially under your car paint.

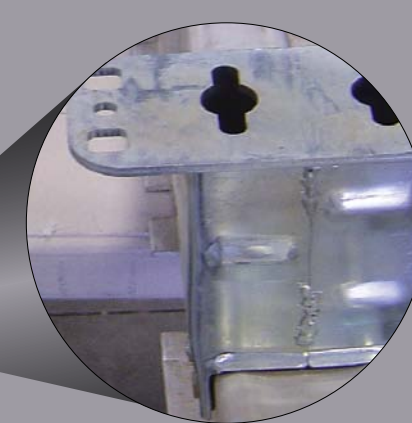
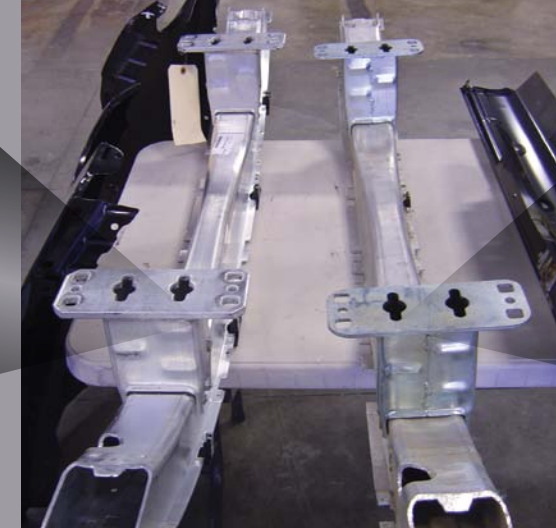
By Aleksey Kadukin



Poor-quality collision repairs—like this one—can come back to bite you with any future accidents.



OEM bumper reinforcement: Notice the metal thickness and solid base.



Aftermarket bumper reinforcement: The metal is thinner, and note the welds on the pieced-together base.

How many of us believe that a second experience can't be as good as the first? Maybe the food isn't as tasty at the restaurant you liked the first time; the weather doesn't sparkle the same way, or the sea isn't as blue at your favorite resort anymore. Well, our second tech session at BMW Concord Collision Center last November proved that theory wrong; it was even better than the amazing experience we had at our 2008 session there!

Collision Center's manager, Kevin Miller, began the session with a discussion about OEM parts quality. He showed us several aftermarket parts to compare with OEM parts. He wasn't talking about blacked-out grilles or invisible light bulbs (despite the fact that even these innocent elements can bring more headache than an owner may imagine), but about the more important parts, the parts for the vehicle's integrity and your personal safety—like sheet metal and internal-bumper reinforcements. According to him, there are zero quality-aftermarket parts available for BMWs currently.

Kevin demonstrated the difference between OEM and aftermarket parts using E60 5 Series front-bumper reinforcements and E53 X5 front fenders. It's much easier to understand with brand-new unpainted parts lying next to each other right in front of you. The difference was clear in terms of metal quality, thickness, and fit and finish between OEM reinforcement and a sample from one of the best aftermarket suppliers.

While most aftermarket companies are copying OEM-part design—with better or worse approximations—the material and assembly plays significant role for the post-repair performance and car-owner safety. Closer examination of two reinforcements showed a

bigger gap between OEM and aftermarket parts—even down to small details, such as bolt sizes and welding quality. OEM parts also go through extensive safety research, while the NHTSA does not even regulate the not-so-twin aftermarket crash parts. Shockingly, the price difference is not as much as you might imagine: an OEM reinforcement costs just \$150 over the aftermarket replacement; fenders are \$40-50 more; and it's just \$15-20 more on a fog light.

The X5 fender comparison proved Kevin's point as well. While the OEM part has an excellent finish, and it fits the car precisely, the aftermarket one had uncentered mounting holes, rough edges, and a suspiciously different prime-coat quality. The aftermarket fender's material was different, too—heavier than the aluminum OEM fender—plus its collision characteristics are unknown. This gave us all a clear understanding of why BMW-certified collision centers are not allowed to use any aftermarket, used, or reconditioned parts during the car-repair process.

Why are aftermarket parts used so widely by car repair shops? The number one reason is the amount insurance companies are willing to pay for the repairs. Small savings for them, multiplied by all their customers, add up to huge profits. BMW, as a company, stands behind their repair process—an advantage for BMW owners. Since insurance companies cannot force the owner to use a specific body shop, it's in your best interest to understand the difference between a certified collision center and no-name body shop.

The insurance companies don't like to pay extra for correct repairs. Kevin explained the price-negotiation process that the center's personnel are involved with daily. The insurance companies have their own estimated labor rates—possibly much lower than the real price for fixing a car properly. On the other hand, BMW has established strict rules for repairs, rather than some fuzzy recommendations other manufactures might have. While BMW-certified collision centers can negotiate a labor price, they cannot negotiate on parts or the repair processes. Not many insurance companies will agree on expensive parts-and-labor estimates at first; thus the task of center technicians is to

present clear proof of the aftermarket parts' incompatibility and prove the necessity for the correct repair process.

According to Kevin, some insurance companies are easier to work with. For example, Liberty Mutual recognizes the importance of quality repair. As a result, they include BMW-certified collision centers in their recommended shops network. In fact, Liberty Mutual currently has a special deal for BMW owners, and supports the use of 100% OEM parts for repairs.

We saw several examples of incorrect repair techniques. The most glaring example was two metal parts which had been glued together instead of being properly welded. That is absolutely unacceptable, and should be fixed immediately. The cost of fixing a bad repair can easily surpass the price of the original repair.

One of the horror stories Kevin told involved a car that BMW Concord Collision Center evaluated after another shop's bad repair. The work was so poor that the insurance company totaled the car after the investigation!

The center can do collision-repair quality investigation by request. They'll even check welding quality from the inside, using a borescope (an optical device used for inspection work where the area to be inspected is inaccessible by other means). The correct treatment of inner areas during repair is very important; lack of cavity wax for corrosion protection will lead to imminent and rapid rust, especially in areas of the country affected by harsh weather conditions.

Near the end of the session, we were given a demo of a smart-spot welding machine. Since the center always keeps up with the most sophisticated tools, this machine has had some improvements added since we saw it last year. The technicians demonstrated how the flexible arms allow factory-quality spot welding in hard-to-reach areas of the car.

To finish the session, Kevin answered several of our members' questions. One was about pros and cons of paintless dent repair. It turns out that BMW has no problem with that kind of dent repair, as long as it's done without any holes being drilled.

Glass-replacement policy was another interesting Q&A topic. Kevin pointed to the fact that the windshield is more than just a piece glass on our modern cars; the windshield plays a significant role in the structural integrity of the car's body, especially for roadsters and convertibles. BMW's instructions for glass installation requires that some models have the installed glass sit on the static car for up to 24 hours before the process is officially complete. Imagine having a mobile technician do a quick glass replacement on your car in a parking lot, and then hearing that you shouldn't drive the car for 24 hours. Not many of us had heard that before!

I thought I'd learned a lot about collision repair at our 2008 tech session, yet I found out so much more this time! Gaining a better understanding of how to properly maintain the exceptional engineering of our BMWs is a valuable lesson. It's with much gratitude that I express my appreciation to BMW Concord Collision Center for inviting our chapter into their shop again.



Compared to an OEM part, and aftermarket part can vary in metal type, thickness, and finish, plus the latter's collision characteristics are unknown.



A proper crash part uses backing plates to add strength, mounting points that match the original part, and appropriate bolt-hole sizes and position.



Collision Center's manager, Kevin Miller, explains the important differences between aftermarket parts and OEM parts.