

## Steel Yourself for Changes

*New High-Strength Steel Poses Challenges for Repair Time and Materials Costs*

Technical Tips from Branden Loesch, 3M Automotive Aftermarket Technical Service Engineer

**LAS VEGAS, NV (November 4, 2014)** – The collision repair industry is seeing more vehicles with high-strength steel, posing some new challenges for technicians. As OEMs push to meet future CAFÉ standards, they are looking to new alternative body materials that provide greater strength to meet crash and rollover standards, while also allowing them to lighten the vehicle to reach the 54.5 MPG goal for 2025. The change in part composition is sure to impact your shop's repair time and materials cost. What actions can you take today to improve your processes for tomorrow?

High-strength steel (HSS) parts present a challenge to body shops and body technicians for a number of reasons. You have limited use of traditional repair methods for applying heat, pulling, hammering and sectioning. With HSS you must be aware of OEM recommended heating, pulling and sectioning guidelines prior to the repair so you create a repair that matches the vehicle's original crashworthiness standards. To create a safe and crashworthy repair, technicians now must use the proper equipment and tools to limit the amount of collateral damage to the host panel during panel disassembly and assembly.

Let's take a look at panel disassembly operations.

If you walk into a shop today, body technicians are likely using one of two tools to remove spot welds during disassembly – either a drill or a die grinder. There are other methods, like an oxyacetylene torch or plasma cutter that may have been used in the past for this operation, but we have finally put those dinosaurs to rest with the drill or die grinder.

While die grinder or drill both work and get the job done, there are some concerns and negative impacts when using them. I see many technicians drilling to remove welds on vehicles today. This is always a challenging process because drill bits do not cut welds efficiently, and it takes a significant amount of time to remove all of the welds in a panel using a drill. They also have a tendency to damage the host panel, either through over-drilling and drilling into or through the host panel, or by missing a portion of the weld, resulting in tearing the panel when separating with an air chisel.

This leads to a loss of strength in the part and also extended repair times because the technician spends a significant amount of time repairing and straightening the flange prior to installing a new panel. Drills and drill bits can also send your material costs through the roof, especially on high-strength steel panels that require hardened drill bits that have a significantly higher cost and tend to have a shorter life span, which requires multiple drill bits per repair.

If your technicians prefer grinding, you must now be concerned with heat generation and burning of the host panel, which could alter its strength. There are also concerns with over-grinding and spark control/protection. To make a long story short, drilling and grinding can get the job done, but there is a much better way to do it.

Enter the 3M™ File Belt Sander and Cubitron™ II file belts.

The 3M™ File Belt Sander tool was brought into the collision market in 2013 to help meet the technician's challenges with spot weld removal and part replacement on today's vehicles, especially those

made out of high-strength steel. The 3M™ File Belt Sander provides improved control and speed, as well as reduced fatigue for those technicians who are using it in place of drills and grinders. Technicians can now cut through spot welds, and control their depth of cut much more accurately so they do not damage the host panel during weld removal. The 3M™ File Belt Sander is a tool that efficiently removes all the weld material, which significantly reduces the collateral damage done to the host panel during weld removal.

The cutting action of the 3M™ File Belt Sander used with 3M™ Cubitron™ II file belts have significantly improved technicians productivity throughout the process. The precision-shaped grain abrasive technology used in 3M™ Cubitron™ II file belts slice through high-strength steel and remove welds much more efficiently than traditional methods. This new Cubitron™ II mineral technology allows you to cut welds faster, allowing more welds to be removed with a single belt.

Using the file belt solution also leaves your technicians with renewed energy no longer having to use excessive force to get a drill bit or grinder to cut through high-strength steel. Now, they simply have to put the belt in contact with the panel and hold it in place during weld removal, which leaves technicians with much less fatigue at the end of the panel disassembly process. The versatility and design of the 3M™ File Belt Sander allows your technician to reach welds in difficult areas that historically have taken a significant amount of time to remove. Now your technician can reach and remove these welds by quickly adjusting the file belt arm.

If you are struggling to remove welds in high-strength steel applications, the 3M™ File Belt Sander and 3M™ Cubitron™ II file belts are the solution you have been looking for. Put them in your process today and see your efficiencies and technician morale improve!!

3M has also recently published an expanded brochure of standard operating procedures. Visit [3Mcollision.com](http://3Mcollision.com) for more product solutions for high-strength steel along with our library of standard operating procedures, and contact your 3M sales representative for a demonstration today.

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