

TECHNICAL FEATURE

REPLACING A QUARTER PANEL – THE RIGHT WAY: PART 2*

*A continuation of the Technical Feature in the November 2016 issue.

At the 2016 SEMA Show, Larry Montanez offered a Repairer Driven Education (RDE) case study of the procedures for steel quarter panel replacements. The program discussed required operations and materials to replace a steel quarter panel on three procedurally similar vehicles: A 2015 Honda Accord, a 2015 Toyota Camry and a 2015 Audi A5. The concept and goal of this presentation was to have the attendees gain a better understanding of OEM repair procedures and protocols, where to locate them, how to decipher them and how to explain the additional operations and costs to restore the vehicle to its pre-loss condition. Joining method differences such as (but not limited to) Bonding, Silicone Bronze/MIG Brazing, MAG welding and STRSW were discussed. Special attention was given to the calculations and explanations of feather, prime and block sand and weld zone area damage repair operations.

OEM steps were reviewed for the class in a broken-down format to better explain the hows and the whys for these procedures. In the case of Audi's *erWin*, Larry asked the attendees the following questions:

■ Why does the battery need to be disconnected during repairs? Audi's *erWin* explains that *"before welding, you must disconnect both battery terminals and cover both battery posts."*

■ Are you performing post-collision inspections? The *erWin* explains that *"after every accident, [the] seat belt system must be checked systematically. If damage is determined when checking the test points, [the] customer must be informed regarding [the] necessity of changing belts. Before beginning separation work, straightening or dent*

removal, remove mechanically activating belt tensioners without load detection [release lock]. With electronically activating belt tensioners, the battery Ground [GND] strap must be disconnected."

■ Are you pre-scanning the vehicle and post-scanning (in-house or at a dealer)? The Audi *erWin* explains that *"if electronic components were removed for service, and/or involved in a collision and then reused or replaced, these are to be checked for function according to the available documentation after installing. To do this, check all DTC memories with a tester and correct any possible malfunctions present."*

■ Are you pre-measuring the vehicle structure, steering and suspension components? According to *erWin*, *"Damage to the running gear and assembly mountings, which could have serious effects later on, is sometimes not discovered when accident vehicles are being repaired."* The paragraph goes on to state the importance of visual checks and measurements of the structure mounting points, steering and suspension components that **must** be performed.

■ Do you road test every vehicle? The following is stated in *erWin*: *"Finally, a proper road test after repairs ensures that the vehicle is safe to drive and can be handed over to the customer."*

There was also some time spent on how to look up the repair information and how to read the pictures using the "Legend" for the illustrations outlining cut areas, distances, welding operations, foam and adhesive

locations. Pictures of the vehicle disassembled, with quarter panel removed and inner structure exposed, were discussed to determine how many inner panels were damaged from the removal and installation and required repair and refinishing. (In this case, there were 20 areas).

It was emphasized that the final invoice is written during the triage. If the following procedures are adhered to, this will ensure nothing is forgotten and there should only be a supplement for dealer services. Lines in *italics* are repeated from part 1. Lines in standard print are new or additions.

■ *Wash the vehicle prior to the damage analysis.* This will ensure all damage can be seen and that the vehicle is free of any foreign substances prior to repairs beginning.

■ *Walk around the vehicle for a visual inspection.* Check panel gaps and operation, wheel position at each corner and look at panels for variations or deformities.

■ *Take notes and photographs.* Make sure photographs are taken at all steps. This will assist in documenting the job not only for your liability, but also if a suit needs to be brought against the insurer for refusal to pay.

■ *If vehicle is operational, start it and note the mileage and if any MILs are illuminated.* Take a photograph to verify which MILs were or were not illuminated.

■ *Scan the vehicle systems regardless of whether there were MILs preset. (Not all DTCs will set a MIL.)* Print a copy for the file (hard copy or electronic), take note of history and current codes. You

will need to look up the codes and make notes on the system they are related to.

■ *Take some quick measurements. If any misalignment is found, then pre-measure the vehicle.* In this case, there was no misalignment of structural components or mounting points for steering and suspension (or the components themselves). The only displaced components were those being changed as assemblies. Frame time was added for the pull to the outer wheelhouse panel.

■ *Now, it is time to start writing the damage report – but first, check the OEM repair procedures. Check only with the OEM website.* (In this case, we used Audi erWin.)

■ *Have a technician disassemble the vehicle.* After examination and verifications, disassembly was then performed. The vehicle was re-examined and benched, and the quarter panel was removed for another examination to finalize the damage report.


See below for the quarter panel categories as presented in the class:

- FRAME
- EXHAUST SYSTEM
- WHEELS
- REAR BUMPER
- REAR BODY PANEL
- REAR LAMPS
- TRUNK LID
- QUARTER PANEL

Preliminary Estimate			
Customer: Montanez, Larry			
2015 AUDI S5 QUATTRO PREMIUM PLUS 2D CPE 6-3.0L-5C White			
ESTIMATE TOTALS			
Category	Basis	Rate	Cost \$
Parts			6,351.87
Body Labor	113.0 hrs @	\$ 50.00 /hr	5,650.00
Paint Labor	46.6 hrs @	\$ 50.00 /hr	2,330.00
Mechanical Labor	6.2 hrs @	\$ 50.00 /hr	310.00
Frame Labor	9.4 hrs @	\$ 50.00 /hr	470.00
Miscellaneous			250.00
Subtotal			15,361.87
Sales Tax	\$ 15,111.87 @	8.6250 %	1,303.40
Grand Total			16,665.27
Deductible			0.00
CUSTOMER PAY			0.00
INSURANCE PAY			16,665.27

- BACK GLASS
- WINDSHIELD
- ROOF
- PILLARS, ROCKER, FLOOR
- DOOR
- SEATS & TRACKS
- RESTRAINT SYSTEMS
- CONSOLE
- ELECTRICAL
- INSTRUMENT PANEL

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Aluminum Outer Body Panel Repair Workshop

This workshop consists of a 1 ½ Hour Presentation on the following:

- ✓ Aluminum Usage
- ✓ Aluminum Intensive and Hybrid Construction
- ✓ Aluminum Series and Alloys
- ✓ Repair vs. Replace Decisions
- ✓ Repair Equipment for Outer Panels
- ✓ Heating Techniques
- ✓ Hammer and Dolly Techniques
- ✓ Dent Removal Equipment and Techniques
- ✓ Reshaping Techniques

The Presentation is followed up by 3 ½ Hours of hands-on aluminum repair on hoods, doors and fender panels.

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TECHNICAL FEATURE

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- FENDER
- RADIATOR SUPPORT
- INFORMATION LABELS
- MISCELLANEOUS OPERATIONS AND SUBLET SERVICES (32 OPERATIONS)

After examination of the damage report, the final numbers were \$16,665.27. The damage reports for the Honda Accord Coupe and Toyota Camry four-door were a little less (about \$12,000) due to part price differences and the fact that refinishing over the roof and on to the right uni-side was not necessary. See the estimate totals on page 31. If you're interested in a class like this one (or on any other topic), please feel free to contact P&L Consultants. **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.

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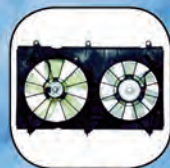
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