

# The Theory of EME + 54 = PROPER REPAIRS: THE LACK OF BASIC ESTIMATING PROCEDURES CAN KILL YOUR PRODUCTIVITY!

By Larry Montanez III, with Peter Pratti Jr.\*

## Part Two

The estimator is the “quarterback of the shop.” If he or she fails to document all of the damage, the technician may or may not repair some missed damages, and the shop will not always get paid for it. *The estimator plays a pivotal role in the shop’s success and profitability.*

The estimator needs to set the repair process in proper motion *by writing an accurate damage report.* It will be used as the work order after it is put through the management system, and will eventually be the final repair invoice. It is imperative that this damage report encompasses all the damage and repaired, replaced and refinished procedures. All too often in repair facilities, the estimator will write an incomplete estimate and say, “I’ll call for a supplement; I do not have time to get that deep into this vehicle.” That is, quite simply, no way to run a collision repair facility. Oftentimes, one will hear that “the insurance company will not pay for (the procedure in question).” The insurance company representatives are *not* the repair professionals; insurance companies *pay* for the repairs and cannot dictate the repair process.

Shop estimators ask, “What does I-CAR say about this repair procedure?” I-CAR does not set or police repair procedures. Each automaker may recommend a repair procedure. If no repair procedures exist from the manufacturer, then I-CAR has some general repair or sectioning procedures, better known as the UPCRs (Uniformed Procedures for Collision Repair).

In a December 2007 *I-CAR Advantage* article, I-CAR asked, “Do the UPCRs still apply to new vehicle design?” I-CAR’s answer was, “Maybe not, due to the advanced metals and design technologies in newer vehicles.” I-CAR also stated, “The UPCRs have not been revised [lately].” However, the business of collision repair has drastically changed over the past 25 years. To understand the latest in new steels, I suggest at-

tending the I-CAR SPS07 course on New Unitized Structures and Technologies. This course will change your attitude towards collision repair.

The days of repairing vehicles based on your opinion and past experience are over. Repair facilities need OEM repair information and training just to understand what is and is *not* repairable. The days of using heat to repair vehicles are also over, because most OEMs want their vehicles repaired cold with stress relief accomplished by vibration (hammering with blocks of wood).

The complexity of the metallurgy used in today’s vehicles needs to be fully understood by the estimator and the repair technicians. The liability issue is bigger than ever. I have seen too many vehicles repaired incorrectly during my investigations. At times, I have discovered that the vehicle was never measured. If it *had* been measured, it would most likely have been repaired correctly.

I also consult with many shops that are involved with a Direct Repair Program (DRP). Many DRP contracts state that the shop must have a damage estimator who has passed the ASE B6 test, as well as have an I-CAR qualified welder and three-dimensional measuring equipment with a printout of before and after measurements. I strongly agree with these requirements. These easy-to-fulfill requirements will help ensure that the repair facility will have some of the tools and knowledge to repair the vehicle correctly.

Now, let’s take a look at a vehicle being estimated utilizing the EME 54 theory.

On Monday morning, a vehicle is towed into your shop, and the customer fills out all the paperwork and signs all needed authorizations. The vehicle is movable, but not safely *drivable*. The vehicle is moved into the estimating area of the shop. This area has some hand and air tools, a fluorescent drop



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light, a creeper, a hydraulic jack, jack stands, a digital camera, a computer or estimate pad, a two-post lift, multiple-sized speed squares, a metric tape measure, a tram gauge and an electronic three-dimensional measuring system.

For this example, we will use the Car-O-Liner Car-O-Tronic Vision X3 system, which will be referred to as “the X3 system.” Our vehicle will be a 2008 model that has sustained damage to the front of the vehicle. The hood does not open, and both of the fenders are damaged. The front bumper assembly is pushed into the vehicle structure, but the front doors open and close normally.

**Step 1:** Take photographs of the four corners of the vehicle, the Vehicle Identification Number (VIN tag and label), license plate, full view of damage, close up of the damage and undercarriage, doors, trunk, closed or open hood, exposing damage if applicable.

**Step 2:** Do a “walk around” of the vehicle. To do this, you must start by walking to the opposite end of the vehicle from the damage. For example, if the vehicle is damaged in the front, you start by opening the trunk. The reason for this is that you are looking for any secondary or indirect damages. The new metals in vehicles are designed to transfer collision energy from the front of the vehicle around the passenger compartment to the rear of the vehicle, and from the rear to the front.

After opening and closing the trunk, it appears to operate normally. You now move to the rear doors to check their operation. Both rear doors operate properly. Now, you will need to do a quick check of the rear suspension. This is easy. At the end of the rocker panel, place your fingers between the rear tire and the rocker panel on one side and then compare it to the other side. If there is a difference, there is some sort of damage to the rear suspension cradle or mounting areas. If it is equal, that does not mean there is not damage; it will still need to be measured, but we will discuss this process a little later.

**Step 3:** Take the damaged parts off the vehicle. Some estimators might call this process *teardown*, blueprinting or “triage.” I prefer the term “teardown.” The teardown can only be performed if the insurance companies allow the teardown, due to proof of loss or subrogation. If this cannot be done at this time, a light teardown of damaged parts should be able to be performed. In this example, you need to remove the hood latch/lock bolts to open the hood. Remember to take photos during this process.

**Step 4:** Raise the vehicle up in the air. This is one of the most important steps, because there could be a lot of movement that can happen in the undercarriage. It has been estimated that as much as 40 percent of the structural damage can be ascertained by looking *under* a damaged vehicle! Look for any leaks, bends or kinks in the rails, floor pan or trunk floor. Look at the suspension mounting locations for any movement. Look at the exhaust mounts and heat shield mounting locations. Any movement in these locations would indicate structural movement. Any damages found should be photographed.

**Step 5:** Now, it is time to set up your electronic measuring system. Follow the equipment maker’s procedures for the setup. Set up the measuring ladder on the Car-O-Liner stand, a table or adjustable portable stands. You will need to look up the vehicle specifications in your system and use the data for underbody, upper body and point-to-point to compare to the damaged vehicle. Attach the measuring arm to the bridge. Take four measurements in the center section of the vehicle to position the measuring system to the vehicle. You are now ready to take measurements. Starting with the first of the five important areas, measure the complete underbody. You will now measure the underhood area. Make sure to measure the strut mounting bolts on the strut tower and the radiator support reference locations. Moving to the side structure, you will measure the door hinge mounting locations and the striker mounting locations. In the fourth location, you will measure the trunk area reference locations and then the suspension parts. First, remove all four tires so that all the mounting locations can be accessed. It is imperative that these measurements are done along with using the speed square to check the knuckle assemblies.

**Step 6:** With all the visual investigations and measurements you have taken, you now can diagnose what is and what is not damaged. Add this to some research of OEM repair information, and you are ready to start writing an accurate damage report. There really should not be any surprises during the repair process, because you have performed a thorough investigation. There should not be a supplement needed, except maybe for parts price differences, some unforeseen part or perhaps an OEM change of what is available, such as a superseded part.

**Step 7:** The vehicle should now flow through the shop easily without delivery issues, because you have conducted a thorough investigation and written an accurate estimate.

### Conclusion:

If you follow the P&L theory of EME and 54, you can accurately ascertain all damages, have good production work flow, limit supplements and make safe, liability-free proper repairs. Your productivity will grow – along with your profit margin!

*\* Additional consulting by Dave Demarest Jr.*



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