TECHNICAL

FEATURE

DIAGNOSIS
MYTH-INFORMATION

A *myth* is defined as "a usually traditional story of ostensibly historical events that serves to unfold part of the world view of a people or explain a practice, belief or natural phenomenon." *Information* is defined as "knowledge communicated or received concerning a particular fact or circumstance; news, or knowledge gained through study, communication, research, instruction, etc.; factual data." *Misinformation* is defined as "to give false or misleading information to, false or inaccurate information, especially that which is deliberately intended to deceive, false or incorrect information, that is spread intentionally or unintentionally."

Now there is a mashup word to describe the misleading and incorrect information running around the collision repair industry. This descriptive word is *myth-information*.

Myth-information is defined as "a myth that is combined with misinformation disguised to be or believed to be factual information." It is the classic example of "just because you believe it doesn't make it so." Myth-information is a story that's told again and again in an attempt to intentionally fool others into believing it to be factual and true. The myth-info serves to explain why something is the way someone wants you to believe it to be for the purpose of selling you on their agenda.

In this month's article, you will need to reference a dictionary, and I will confirm or deny some of the biggest lies – oops, sorry – *myth-information* you have heard.

Electronic Diagnostic Evaluation

Many myths have been created due to the confusion of the ALL NEW collision repair diagnostic protocols that have come out of nowhere. It was shocking to us, too, as 15 years is like, what? *YESTERDAY*? Wait, you didn't know or realize this? No one knocked on your door and said, "Hey, look at this?" Oh, right, it wasn't handed to you, so some of you didn't raise a hand to go research and read. These days, there is major confusion over some common terms in the collision repair industry that are currently used in the mechanical diagnostic field (for the past 20 years). Now let's not start making up our own terms and definitions to make ourselves feel more important. (Let's not forget the whole incorrect MIG welding issue.) I have read articles where terms such as "pre-scan," "post-scan" and "post-repair calibration" are being coined. Why? First of all, the term "scan tool manufacturers" is incorrect. The tools are diagnostic tools or diagnostic scan tools, not just "scan tools."

When a vehicle is in a collision event, two very important diagnostic operations or procedures must be performed. One is a diagnostic scan of the vehicle modules for any fault codes or diagnostic trouble codes (DTCs). NO, A LIGHT ON THE DASHBOARD OR INSTRUMENT PANEL WILL NOT BE LIT. The fact for those caught in the 1980s is that a Malfunction Indicator Lamp (MIL) will not illuminate for 80 percent of the issues with a vehicle during normal use and will not illuminate for 99 percent of the issues with a vehicle involved in a collision event. A diagnostic test must be performed to ensure all systems are operational. If every system had a MIL, you would have over 400 lights on the dashboard for each system malfunction issue. The other diagnostic operation is pre-measuring the vehicle. (More information is in the next section.)

During the repair process, because the battery must be disconnected and reconnected multiple times (and, in many cases, computer modules will be disconnected and the vehicle will have to be powered to move it around the shop), other codes may be set that will require resetting/clearing. Now keep in mind the statements, "Push the vehicle around the shop," or "It is your fault the code got set" are not only ignorant, but they prove how uneducated the person saying it is. As such, these are classified as *myth-information*.

Once the vehicle is repaired, a diagnostic test must be performed to check functionality (and, in many cases, to relearn, reinitialize or even reset the system). Some systems need to be reintroduced to each other after replacement or just removal and reinstallation. For example, a back-up camera with steering guidance must be realigned or introduced to the steering angle sensor after removal or replacement of the truck lid/lift gate/hatch or replacement of the camera unit. Parking aid sensors/cameras on some vehicles and lane departure and distance cruise control systems on most will require diagnostic testing after repairs are completed. Additionally, almost every single OEM requires a check of the Occupant Weight System (OWS) after a collision. This is to ensure the sensors or bladder in the passenger seat is reading the known weight placed on the seat accurately during the sensitivity test. This will guarantee that during a subsequent collision event, the seat reads the weight of the occupant correctly (if occupied) and the appropriate airbag system response is commanded (even no deployment if a rear facing child seat occupies the front passenger seat). For more information on development and training, go to the Collision Repair Diagnostics Definitions section of I-CAR's website (tinyurl.com/zfes822).

BY LARRY MONTANEZ III, CDA

Pre-Measuring Structural Diagnostic Evaluation

The foundation of the vehicle is the structure. Whether it is a full frame vehicle or monocoque (unibody) vehicle, the steering and suspension components are bolted directly to the structure. The applied collision impact forces put a great amount of stress on not only the vehicle structural components (as they transfer the collision pulse), but the steering and suspension component mountings can also be displaced. The *myth-information* I hear all the time is, "The gaps are fine, so there is no structural misalignment," "There is not enough damage to warrant measuring the vehicle" or the *very* ignorant, "It looks good." In fact, pre-measuring is more important than pre-scanning a vehicle. If you did not pre-scan the vehicle, you can still correct your mistake by post-scanning and still be able to clear codes without causing too much of an issue. Conversely, if you do not pre-measure the vehicle, numerous issues could occur during the repair process or even worse – after repairs are completed, such as (but not limited to) the following:

- Uncovering more sustained damage during the repairs, prolonging the repair and tying up the bench while waiting for parts to arrive.
- Discovering more sustained damage, causing the vehicle to become a total loss.
- Bolt-on part misalignment during attempts to reassemble the vehicle.
- Discovery of steering or suspension component damage during the wheel alignment.
- Discovery of structural misalignment during the wheel alignment.
- Three to six months after repairs were completed, the vehicle owner returns with a complaint of balding tires.

These are only a few of the issues that could occur by not performing a complete diagnostic pre-measuring of the vehicle. For more information on pre-measuring, read our articles on our EME54 Theory (tinyurl.com/gsf39hv and tinyurl.com/gmuvjan).

I hope this article has enlightened you to the importance of post-collision/pre-repair diagnostic testing and pre-measuring to ensure proper and safe repairs. As always, please feel free to contact me with any questions. **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

Scanning of any kind is like a doctor who takes your blood pressure, temperature, measurements and weight before they even get to why you've come to visit. Knowing the baselines of the electronic systems, and the structural status, is the only way to properly estimate for repair and cycle time. How else can you be sure of either? - Jordan Hendler