Featured Story from the March/April 2006 Today's Tire Industry

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The State of TPMS

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For the last decade, I've tried every method imaginable to teach tire technicians the proper way to service tires and wheels safely. One of my most effective classroom techniques is to use analogies that put complex concepts into terms and relationships that anyone can understand. So here's one analogy for the state of Tire Pressure Monitoring Systems (TPMS):

Years ago, the government discovered that playing video games raised the IQ of everyone that played at least two hours a day. Given the educational benefits to the general public, legislation mandated that television manufacturers must include a video game console. At the time of this discovery, the video game industry basically consisted of Pong. But Congress couldn't wait for the industry to develop technology naturally, so they mandated an implementation schedule that would force all of the television manufacturers to develop their own video game systems for their products. And Pong isn't good enough, so it needs to perform more like a Playstation2 or X-Box in five years and consumers won't get an instructional manual.

There's no sense in discussing the road that has taken us to where we are today with TPMS because the number of vehicles with this technology is only going to increase. In the last issue of this publication, I introduced our new TPMS Training Program and judging from the record number of kits flying out the door, a lot of dealers are faced with the challenges of valve stem sensors and relearn procedures. I also indicated that TIA wasn't finished with TPMS education and will continue to provide members with the latest information as it becomes available. As a member of TIA, you receive this publication every other month and when it comes to TPMS technology, a lot can change in two months.

What hasn't changed is the myriad of systems, relearns, grommets and complaints. If I keep saying it, maybe I'll convince myself and others that it's going to get better and we'll only have to deal with these issues in a few million vehicles that encompass five or six model years. And from what I've learned in the past three months (the Jan/Feb issue was written in Nov), that hasn't changed.

'I cannot stress enough the importance of embracing the challenges that are coming with TPMS. At some point in the very near future… about half the tires and wheels you service will involve a TPMS.'

What has changed is the availability of tools, equipment, and resources to service the tires and wheels on vehicles with TPMS. I always get a laugh when I stress the importance of valve core torque. And you read that correctly, the valve core in the valve stem sensor has a recommended torque and failure to install the valve core with the proper torque can result in problems. If the colored seal at the tip of the core is severely deformed by overtightening, the nickel plating could be chipped away and expose the valve stem to the brass valve core, which results in a frozen valve core and possible broken sensor.

For those of you who just have to know, the actual torque for a valve core is 0.13-0.37 nm. For those of you who just want to know how they torque a valve core to 0.13-0.37 nm, a new valve core tool has entered the market. I tried it with some technicians a few weeks ago and we had to practically frisk them on the way out so it didn't accidentally get forgotten in someone's pocket. It basically has a slip gear that causes the handle to spin like a gas cap after the torque has been reached. And I have to admit, I tried everything I could to get one the first time I saw it a couple of months ago.

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Besides the impressiveness of the valve core tool, technicians were also amazed at the delicate nature of torquing the hex nut. The torque wrench we were using had a handle that would just slightly “break” when the torque was reached. Since the “break” was very subtle, it was easy for the guys who were in a hurry to overtorque the hex nut. They would go so fast that they would never feel anything until the valve stem broke. Some of them were expecting an audible click, but this particular torque wrench made no sound when the torque was achieved. However, when they slowed down, they were amazed at how easy it was to overtorque a sensor.

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I cannot stress enough the importance of embracing the challenges that are coming with TPMS. At some point in the very near future (I’m guessing it will start around 2010 when the 2008 models with 100% percent TPMS need their first set of replacement tires), about half of the tires and wheels you service will involve a TPMS. And if you want to work on all makes and models, you’ll need the tools, equipment, supplies and training to avoid a trip to the service department at your local new car dealer.

Now that doesn’t mean you should write a check every time you see a brochure on the latest gizmo for scanning or recalibrating valve stem sensors. I have never seen anything that could do everything because there are always exceptions and limitations, especially with new tools. That being said, if it works more than half the time it’s probably worth its weight in legal bills. Every step a dealer can take to verify that the sensor was working before and after the tire/wheel service was performed will reduce the liability related to TPMS. If that means today’s tool becomes obsolete or a better one becomes available, then companies will be forced to update or upgrade. Accept it. Embrace it. Charge for it and move on.

When enough consumers are affected by the costs of servicing vehicles with TPMS, a few people in Congress will probably get letters that are questioning why they don’t have a choice. Why did the government mandate a vehicle safety device that the industry wasn’t ready for or in favor of? After all, couldn’t they just mail every driver an air gauge and a little note that tells them to check their tires once a month? For that matter, mail one every year. Heck, for the price being paid by the vehicle manufacturers and tire dealers, you could probably mail one once a month for the next 50 years and still come out ahead.

Someone told me the other day that only medical lawsuits outnumber tire lawsuits in the United States. I’m not surprised because unscrupulous lawyers will circle like sharks around an industry that they can exploit for

a few million dollars here and there. In the courtroom, no tire or wheel assembly should ever fail for any reason. Poor maintenance, neglect, and impact damage appears to have little to do with the fact that the tire failed and the resulting accident caused injury or death.

'You should be focused on what's best for your customer and that means making every effort to recalibrate, educate and documentate… everything you can related to the TPMS on the vehicle.'

Now imagine the tire failing and the accident being caused because the tire dealer did not make an effort to recalibrate the TPMS. The driver was never warned of an underinflated tire and the vehicle's computer showed a fault code that indicated the TPMS was not in operation at the time of the accident. To make matters worse, the dealer didn't even make an effort to educate or warn the customer that the TPMS might not be operable. Nobody said or did anything to ensure that a government-mandated vehicle safety device would have a chance to save a life. It will happen if it hasn't already.

But if you get caught up in the liability, operational challenges or increased expenses, you'll lose sight of what's most important - your customer. You should be focused on what's best for your customer and that means making every effort to recalibrate, educate, and documentate (I know it isn't a word but I wanted it to rhyme and couldn't think of anything) everything you can related to the TPMS on the vehicle. It's going to take extra time and effort, but your customer should be worth it.

The best news is that you are our customer as a member of TIA so we feel the same way about you. What's best for you is if we keep updating you in this publication on how you can adapt to the TPMS universe about to take over our industry. What's best for you is that we continue upgrading the TPMS Training Program with more advanced modules that offer vehicle specific guidelines and procedures. What's best for you is that we never forget what our customers need most from us. So we'll continue to do our jobs so you can do yours.

Site Updated: 1.17.08

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