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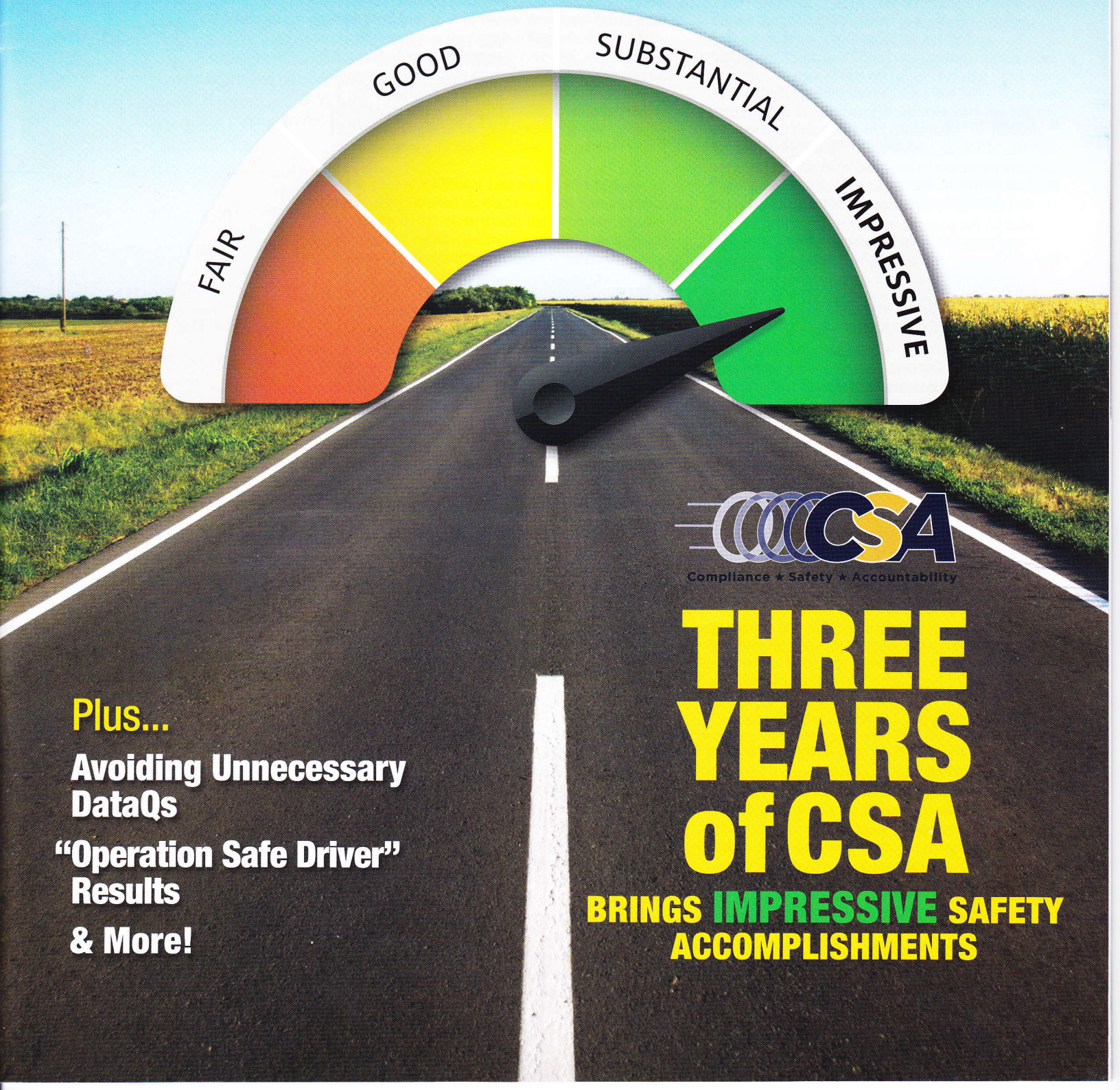

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SAFETY INNOVATORS

Brake Safety & Reporting Can Pay Big Dividends

By **J.A. Clark**, *President, SafetyWatch Technologies, Inc.*

Of the 20,000 trucks pulled over during CVSA's 2013 Brake Safety Week, inspectors put 13.5 percent, or 2,700 trucks, out of service for brake issues. Keep in mind, this is what was found in just one week, and with only a fraction of trucks on the road inspected. How many trucks would have been put out of service had all of the trucks using the road been inspected during that week, or if we treated every week like Brake Safety Week? Extrapolating, we are talking about nearly 150,000 trucks on the road that could be put out of service for brake issues over the course of a year.

Or, let's suppose that those trucks weren't pulled over and put out of service, and instead, got into accidents. Check with any Loss Payable Department or insurance carrier or Actuary and you'll find that a loss figure of 1 million dollars per accident is a conservative estimate. Particularly considering the expanded losses that the trucking industry would ultimately pay: Loss of payload, personal damages, damages to the environment from spillage, damage to highways and increased insurance premiums. Even for self-insured American Trucking Associations (ATA) members, it still costs a potful of money to repay the shared expenses pool. There is also the human equation—the potential harm that out-of-compliance brakes can cause to truck drivers and the driving public alike.

"Safety is a number one priority in the operation of a commercial truck. Improved brake compliance adds to that safety... [and] allows us to improve on delivery times, [reduces] inspection stops due to safety record, saves fuel," said DAJO, Inc. Transportation Manager Joe Chase, adding, "Safety [also] saves money by keeping insurance claims down."

Two of the most important elements to brake safety is knowing your brake's push rod position and whether or not your air valves are sequencing properly. Air valve failure to sequence properly is the number-one leading cause for jackknifing. Currently, there is no way to know if air valves are sequencing properly on a new tractor-trailer without first putting miles on the road to test it.

Key benefits of operating a truck with in-compliance brakes:

- **Stop straight and within shorter distances.**
- **Experience more even tire wear, resulting in fewer change-outs.**
- **Knowing what each brake is doing means less wear on all brake components.**
- **Shave trouble shooting time by half an hour, by knowing which brake is bad right off the bat. This frees up your mechanic to check other issues that may require attention, providing a labor and parts cost savings.**
- **Reduce costs of tickets and fines, as well as downtime.**

Some brake-related issues can be traced back to the challenges involved in design and testing. It can be difficult to predict how long brakes will function optimally in the real world. Considerations include:

- Designers and developers are working from clean rooms on simulators, not necessarily from under a truck.
- The brake environment for trucks is far different from that of a car; unprotected, dirty, and directly subject to all sorts of weather, road conditions and chemicals.
- Much gets lost between engineering and highway applications of truck brakes.

Last but definitely not least, there is cost. It's expensive to design for the environment, the constant wear and tear, faced by trucks. New and road tested technology is not going to be cheap, and it can be hard to justify investing in more bells and whistles when you are just trying to keep afloat.

Yet the bigger cost comes in the form of trucks running with brakes that could, and should, trigger an out-of-service violation. These vehicles cost carriers and the industry at large billions of dollars each year. Most of us know this, yet many opt out of looking for answers through practical brake reporting technology.

Technology Worthy of Promotion: Big Truck Brake Reporting

For the many years that I've been tracking the evolution of brake reporting technology, the biggest inhibitor is phantom rumors of wireless reporting. It causes people to hold off, waiting to invest in this "any day now" technology. My advice? Stop waiting. It's never going to happen.

The truck driving environment is too dirty, and the signal can't be secured. Even if wireless reporting were developed, trucks would pick up each other's signals. It would be hard for drivers to know whose brakes they are reading. Adding to the confusion, there are too many signals already. A U.S. Army General told me that TARDEC (Tank Automotive Research, Development and Engineering Center) is going back to hard-wired technology due to signal overload. I can't see the commercial vehicle industry pursuing a technology that the U.S. Army abandoned.

Still, the need for improved brake reporting technology is well documented. In my own research, I've read numerous primary studies demonstrating that safe braking is key to profitable, on-time fleets and to the safety of all who share the roads. For instance, the University of Michigan's Transportation Research Institute has studies on how a sensible brake reporting system would be a boon for us all.

CVSA is a critical link to safer highways and trucks, representing a broad spectrum of commercial vehicle carriers and drivers, innovators, and enforcement professionals. The truck brake knowledge base also runs a broad spectrum. Working together, we can develop and promote brake reporting mechanisms that increase brake safety compliance, leading to greater profitability, efficiency, and safety. ■