

An authoritative guide from Pressure Systems International to help reduce costs, increase safety and improve operational efficiencies associated with tires.

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The P.S.I. Tire Digest is transitioning to a quarterly publication. We will soon be launching a company newsletter to supplement the distribution of the Tire Digest. Details coming soon.

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Total Cost Considerations of Fuel Saving Tire Technologies and Their Overall Impact on Fleets

The net impact of a fleet's efforts to reduce fuel consumption fluctuates with the cost of diesel. When a fleet considers the adoption of new procedures or specifications that can lower fuel consumption, they typically look at other cost savings as well: maintenance costs, downtime costs (including delivery delays and roadside service expenditures), safety issues, inspection demerits, and more. There are plenty of fuel-saving 'solutions' available to the industry, but in many cases, these may add cost somewhere else - such as the cost to maintain that 'solution'.

Automatic tire inflation systems (ATIS) for trailers, tire pressure monitoring systems (TPMS) for both trucks and trailers, are proven technologies that lower operating costs while generating minimal maintenance costs. Both ATIS and TPMS have been promoted as ways to improve fuel economy and are compliant with upcoming legislation in California and Canada.

Just as the name implies, ATIS automatically adds air to a tire whenever the tire pressure falls below the cold pressure setting, even as the vehicle is running down the highway. TPMS provides visibility to the tire pressure and temperature of each individual tire but requires human intervention to add air to a low tire. For many fleets, the question with TPMS is 'who gets the information?'. Some want the drivers to see it, but others want Operations to view it back at the office via telematics.

Maintenance costs: In most of the fleet research projects, such as a recent one by CK Commercial Vehicle Research, tires are listed as the top maintenance cost, adding significant dollars to an annual budget. If a fleet can reduce maintenance costs by extending wear, improve utilization of casings for retreads and generally reducing the annual tire budget, that solution is very much worth considering. ATIS does all that and has well-documented maintenance models. The independent and unbiased North American Council for Freight Efficiency even quoted in their Tire Pressure Systems Confidence Report that "The reliability and durability" is strong (see www.nacfe.org for more information).

Downtime costs: What's the word you hear most in the commercial vehicle industry today - it's UPTIME - it's what every fleet is trying to maximize. While this has always been the case, today we have greater focus and visibility to tracking shipments as shippers work to meet the "instant gratification" of their customers. There is just no room for unplanned downtime that gets in the way of that objective. Shippers will simply look to carriers that can meet these demands. ATIS pretty much ensures that unexpected loss of air in a tire is not going to take a trailer down while it's full of merchandise. The other equation is that roadside calls are expensive and time-consuming. It's certainly much better to be able to address any tire issues in your own maintenance facility. Typically, the total investment in an ATIS is roughly equal to (1) roadside service call. Simply stated, a commercial vehicle that is not moving is not making money.

Safety: All fleets are concerned about safety. Safety records themselves can make or break a shipper/carrier relationship. Tire blow-outs on the road are safety concerns for both the commercial vehicle and the general public. Any of us that have needed to maneuver around steel laden tire carcasses on the highway know this first-hand. With regard to a fleet's CSA scores, most fleets understand that with ATIS systems on their trailers, those tires are not usually part of a roadside inspection. It has been proven that tire-related CSA points are significantly reduced when using ATIS. Inspectors know that tires with these systems are, in all likelihood, inflated to the proper pressure. The cost of having a vehicle sidelined at an inspection point is the same as a roadside call.

ATIS and TPMS generally have an R.O.I. of a year or less. The fact that the majority of new trailers built today have ATIS, is proof that so many fleets have validated the short payback period. In addition to the quantifiable benefits to a fleet's bottom line, fleets can help the environment too. Most shippers care about their carriers' commitment to reducing greenhouse gasses and improving safety. Including technologies such as ATIS and TPMS can become an important part of your business reputation.

