

# READY to roll

## The Shocking Truth!

Recently, we did a survey of inflation pressure on the dual tire assemblies of emergency medical service vehicles. Here's what we found:

About 39 percent of the tires couldn't be checked at all, because valve stems were inaccessible. We don't know if inflation was correct or not. Worse, even if one of these tires needed air, there was no way to add any.

Some vehicles had extension hoses, so at least we could check them. Nevertheless, results were pretty grim.

Nearly 2/3rds of those tires were underinflated by at least 20 psi. That's dangerously low. Since the manufacturer's specification is 80 psi, these tires were 25 percent underinflated.

The tire industry considers any tire that's been run on the road 20 percent or more underinflated to be "run flat."

Running flat can result in very serious damage to the tire that can cause it to fail catastrophically – and without warning.

Of these underinflated tires, 2/3rds were the inside tire of the dual assembly, which is nearly impossible to see. Only about 13 percent – roughly one in eight of the tires we checked – had the correct inflation pressure.

## Where does the air go?

Why can't we just put air in our tires once, then forget about them?

## How does the air get out?

Well, air can escape from tires in lots of ways. Clearly, there could be a puncture, a nail that's causing "a slow leak." But there are lots of other ways air can escape.

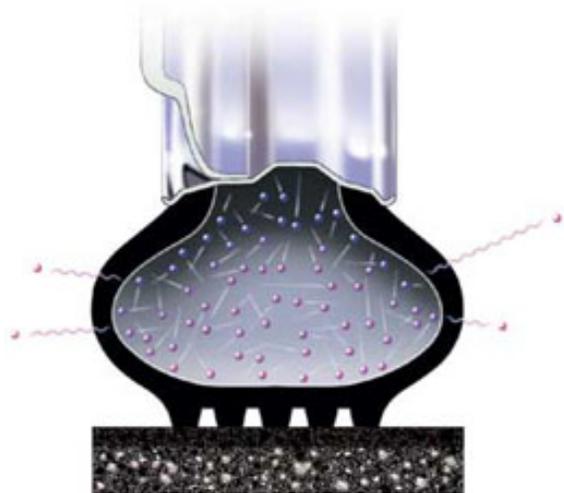
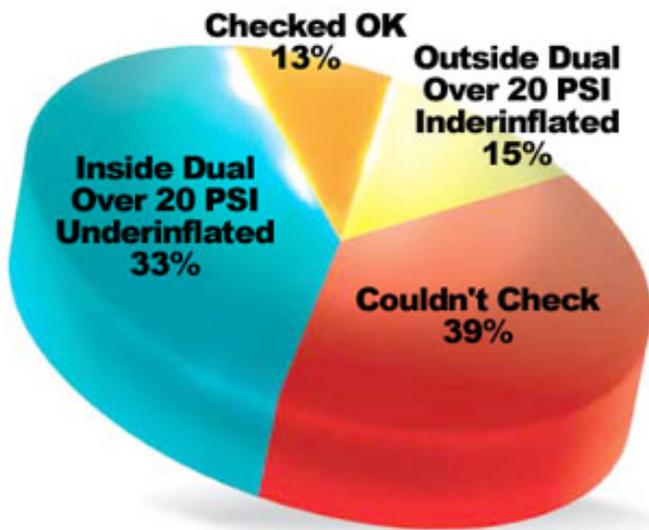
Today's tires are tubeless, which means that the tire itself has to seal directly against the wheel. Improper or inadequate lubrication or a damaged wheel can cause air to escape at the interface between tire and wheel.

Damaged, defective or contaminated valve stems, as we've seen, can leak as well.

But even if all those things were perfect, tires would still lose air. Depending on size, they can lose between 1 and 2 psi per month.

How is it getting out? Well, just as gases can permeate the membranes of the body, air can and does permeate the rubber in tires. Air molecules literally find their way out of the tire – slowly – resulting in a gradual loss of air pressure.

That's why you need to check your tires frequently, even if there's no obvious damage to them.



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Just as gases can permeate membranes in the human body, air can permeate the rubber in tires, resulting in a loss of air pressure of between 1 and 2 psi per month, depending on the size of the tire.

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