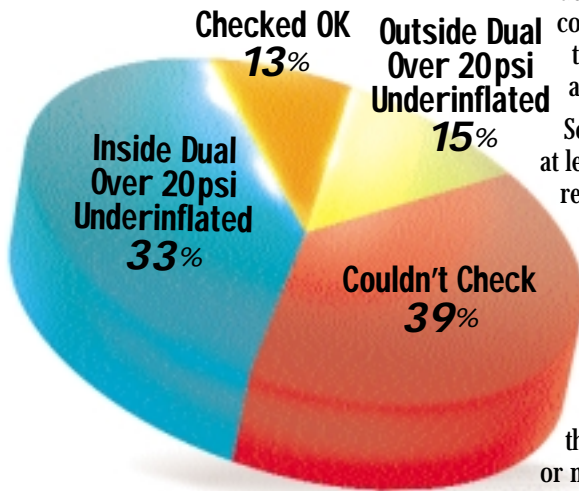


READY to roll

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:



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

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 80psi, 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.

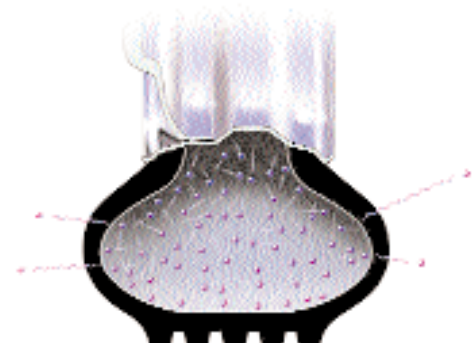
Today's tires are tubeless, which means that the tire itself has to seal directly against the wheel. Improper or inadequate lubrication or a damaged wheel can cause air to escape at the interface between tire and wheel.

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.



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.

Are you running in "the nail lane"?

Have you heard of "the Nail Lane"?

Actually, there are two: Also known as the "shoulder" and the extra lane nearest the median, both are frequently used by emergency vehicles on their way to save a life.

If you use interstates or freeways, you probably spend a lot of time in these "Nail Lanes." Why do we call them that? Because the natural sweeping action of vehicles running down the regular traffic lanes tends to kick most of the nails,

glass and other debris either toward the shoulder or the median.

These two "Nail Lanes" become minefields of sharp objects that can damage your tires. And that's why, if many of your runs take you onto the freeway, you might want to try different tires for your vehicles.

Many emergency response vehicles use "combi" radials, like the Firestone Steeltex Radial A/T™ and Steeltex Radial R4S™ and R4SII™ that feature a combination of a two-ply polyester cord body with two steel belts on top.

These "Combi" tires are light in weight, less expensive and provide excellent service for most normal usage.

Still, if you spend a lot of time in the "Nail Lane," you may be able to reduce punctures and other road hazard damage by switching to an all-steel radial, like the Bridgestone R187F.

Built for much more severe service, most R187F radials feature three full steel belts to provide even greater resistance to punctures and road hazards, together with an all-steel body ply, for long life and resistance to casing damage.

And, the R187F even features thick sidewall protector ribs. These help shield sidewalls from cuts and abrasions that occur as a result of accidental encounters with curbs.

Both sidewalls are ribbed, so when one set of ribs is worn away through use, you can reverse the tires on the wheels for continued protection.

So, if you rarely run the freeway, Steeltex Radials may be your best bet. And, if nail holes and punctures are way too common in your operation, a tire like the R187F may be just what you need.

Ask your dealer to help you select the right tire for your vehicles.

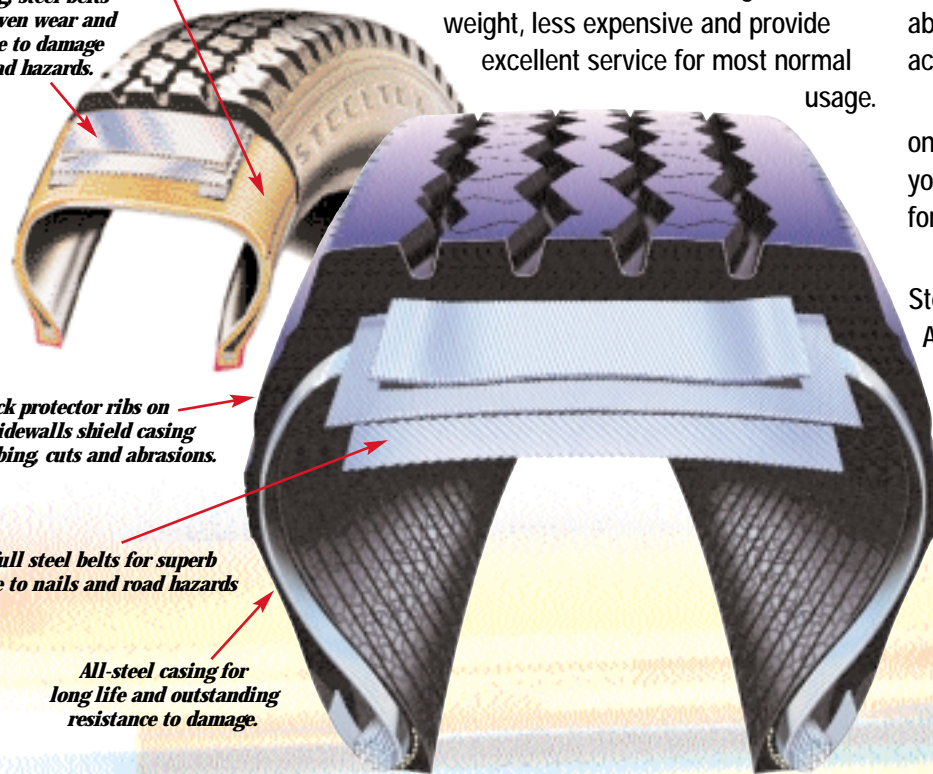
Two layers of polyester cord form a radial body ply that smoothes jolts and road vibration.

Two strong, steel belts for long even wear and resistance to damage from road hazards.

Thick protector ribs on both sidewalls shield casing from curbing cuts and abrasions.

Three full steel belts for superb resistance to nails and road hazards

All-steel casing for long life and outstanding resistance to damage.



We have a flat.
NOW WHAT?

Fixing flats is a job for a tire dealer, not a do-it-yourselfer.

As soon as you possibly can, you need to get the vehicle to a reputable dealer (*You can find the Bridgestone or Firestone dealer nearest you, wherever you are, via our web site, www.trucktires.com. Look for "Emergency Road Service Provider" in the menu on the left side of the home page.*)

In order to do a proper repair, the dealer must remove the tire from the wheel, and if a repair is possible, install both a rubber stem to fill a nail hole, as well as a patch inside the tire.

If either the stem or the patch is missing, the repair wasn't done right. If the dealer doesn't remove the tire from the wheel, the repair wasn't done right.

There also are restrictions regarding the size and type of repairs that can be made. And, some areas of a tire cannot be repaired at all, and the tire has to be scrapped.

A properly repaired tire can be just as serviceable as one that's never been repaired. You and your patients depend on reliable equipment. Improper tire repairs simply aren't worth the risk.

BRIDGESTONE

BF50919 7/01 (30M)

Losing air *ONLY* when rolling?

Recently, an emergency medical service fleet complained of loss of inflation pressure, but only when they made runs – not while their trucks sat parked.

What could cause tires to lose air pressure only when going down the road?

The fleet had been using extension hoses on their valve stems to make inflation maintenance simpler. The valves in the hoses weren't leaking, nor were the connections to the valve stems.

But when they removed the snap-in rubber valve stems, the dealer, Royal Tire of Salina, Kansas, found an odd, sharply defined, diagonal mark running across the part of the stem that passes through the wheel.

It looked as though the stems were being pulled to one side, possibly by centrifugal force acting on the extension hoses. This distorted the seal against the wheel and left behind the diagonal mark – with a shiny surface where the stem was in contact with the wheel – and a dull surface where the rubber was exposed to the outside elements.



When the fleet replaced the rubber, snap-in stems with steel, clamp-in stems with grommets, the problem was solved.

So, if you're running smaller vehicles with dual tires and valve stem extension hoses –

Royal Tire of Salina, Kansas found these distorted valve stems with diagonal marks across the sealing surface on several EMS vehicles.

and having unexplained inflation pressure losses – check those valve stems. You may have the same problem our EMS fleet had.

And, we recommend you use the valve stem extension hoses with stainless steel reinforcing braid and sheathing that helps prevent cuts from the sharp edges of wheel covers.

Finally, be sure that the valve stem extension hose ends are securely fastened to either the wheel cover, using riveted-on metal tabs, or to the lug nuts, using special brackets.

Engineers believe rubber, snap-in valve stems were being distorted, probably by centrifugal force acting on valve stem extension hoses. Clamp-in metal valve stems eliminated the problem.



How much air should be in there?

What's the right inflation pressure?

It's not the number you see on the tire sidewall. That's the minimum inflation for the maximum load. Below maximum load, that pressure could cause hard ride, rapid or irregular tire wear, and might even reduce dry traction.

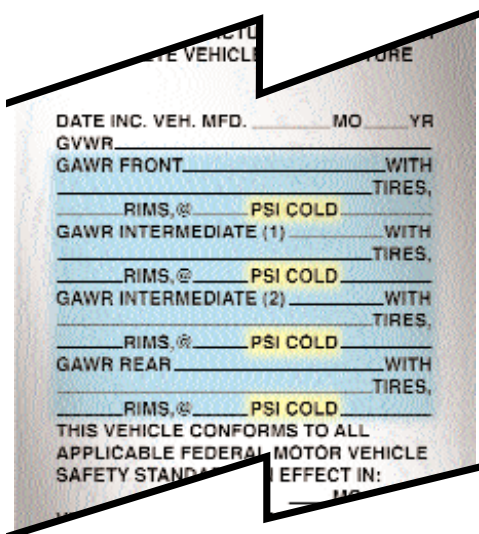
The best place to start is with the vehicle manufacturer's "placard", which you'll usually find on the driver's side doorjamb. (If it's not there, ask the vehicle dealer where it's located.)

Bear in mind that these numbers may not be correct either – if the vehicle has been modified without re-evaluating the load and its distribution, or if you have added a lot of equipment the manufacturer didn't know about.

The absolute best way, if you're uncertain about the correct inflation pressure, is to **weigh the vehicle**, axle by axle, with a full complement of equipment, supplies and people (Don't forget to have someone stand in for the average

patient!). Do this at a truck stop or similar facility, then use tire manufacturers' load and inflation tables to determine the pressure for each tire.

Running tires underinflated can cause rapid or irregular tire wear, loss of wet traction, poor handling, and in some cases, catastrophic tire failure. Correct inflation pressures pay, in tire life and fuel economy, performance and reliability.



The best place to begin looking for the correct tire inflation pressure is on the manufacturer's placard, usually located on the driver's side doorjamb.



Double-seal valve caps provide a double seal for valve stems, yet allow inflation checks and adjustments without having to remove the cap itself.

Double-Seal Caps Mean Easy Inflation Checks

Valve caps are essential. They, not the valve in the stem, are the final seal. Caps keep dirt and water out of valves, which can cause them to leak.

Make sure – at least – that you use metal dome caps with an internal rubber seal. Plastic caps can crack and leak.

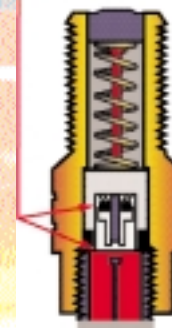
But, valve caps can be a problem. They're easy to drop and lose when you're checking pressures, and even if you find them again, they may be contaminated with dirt, snow or water.

Fortunately, there's a solution, called a double-seal valve cap. These go onto the valve stems, and never have to be removed.

Because they have a built-in, double seal valve of their own, you can check inflation pressures and put air into tires through the cap, without ever removing it.

That saves time, and worries about losing valve caps during inflation checks. Ask your tire supplier for enough "Alligator V2B" or "Dill 6541" valve caps for all your tires.

Double Seals



Double seals inside this valve cap keep air inside tires while allowing checks and adjustments to inflation pressure.

Your first call should probably be to **your tire supplier**. They know better than anyone else what kind of tires you've been using, the conditions under which you operate and your history with tires.

But, if your dealer isn't available, you can contact us directly for real answers to your tire-related questions.

For technical information, call 1-800-847-3272

That number will automatically connect you to the Bridgestone/Firestone technical service center in your area. A member of our field engineering staff will be happy to help you with your questions.

Where can we get tire help?

Any time of the day or night, try our web site, **www.trucktires.com**

You'll find a wealth of technical information there, including tech bulletins, tire specifications, load and inflation tables, and lots of useful tips on tire care.

And, while you're visiting the web site, you can submit your tire-related question to our cadre of tire experts, by sending **e-mail to Ask the Tire Doctor**. Your question will be forwarded to the member of our engineering staff best qualified to answer it, and we'll get back to you as soon as we can.

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