



COMMERCIAL FLEET TIRE DIGEST

*The authoritative guide to reducing commercial tire expenditures from
Pressure Systems International,
the manufacturer of the Meritor Tire Inflation System by PSI™*

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Mileage or Fuel Economy?

*Happy Labor
Day
From
PSI
Tire Digest!*

What is the goal of every tire program? In the past, a serious tire program always included maximizing tire removal miles and getting the most retreads on every casing which would lead to improved total cost/mile. Today, maximizing miles and retreads is still important but fuel economy is now included at the top of that list.

Let's assume you are operating a one hundred truck line-haul fleet and are averaging 6.0 miles/gallon. Your vehicles run 100,000 miles/year. Now as the tire fleet manager you are considering purchasing fuel efficient drive tires to improve fuel economy. The fuel efficient drive tire design has 28/32" tread depth versus your current control or "regular" drive tire which has 30/32" of rubber. In many cases, in addition to tire design and compound enhancements to build a fuel efficient tire, tire engineers begin with less initial tread depth to reduce tire weight and heat buildup; all of which leads to improved fuel economy. Your current drive tires last three years running an average 300,000 miles and cost \$400/each. If you currently average 15,000 miles per 32" of tread, the reduction of 2/32" of rubber (28/32" vs. 30/32") means that your new fuel efficient drive tires will last 270,000 not the 300,000 miles that you're getting from your current tires, a 10% mileage reduction. In addition, the new fuel efficient tire has a 10% price premium, costing \$440/each.

So the question is, since the fuel efficient tire costs 10% more and it gives you 10% less removal miles, is it really worth the 2% improvement in fuel economy expected? It sounds like more bad than good until you do the math.

Two percent improvement in fuel economy will give you 6.12 miles/gallon instead of the 6.0 you are getting with the control tires.

Each of your trucks will use 16,667 gallons fuel/year/truck at 6.0 miles/gallon and 16,339 gallons fuel/year/truck at 6.12 miles/gallon. This is a savings of 328 gallons per year/truck; at \$4.00 for a gallon of diesel, there is a fuel **savings of \$131,200** for your one hundred truck fleet. It's a simple calculation to determine if the reduction in miles/tire and the added acquisition cost of fuel efficient tires is worth it for the potential money you will save on fuel.

The cost/mile of the control tires = $\$400 \times 8 \text{ tires} / 300,000 \text{ miles} = \0.11

The cost/mile of the fuel efficient tires = $\$440 \times 8 \text{ tires} / 270,000 \text{ miles} = \0.13

The 10% loss in removal miles plus the added cost for the tire will increase tire cost/mile by \$0.002 (\$0.13-\$0.11).

For your fleet:

The fuel efficient tire cost over (3) years = $100 \text{ trucks} \times 270,000 \text{ miles} \times \$0.13 = \$352,000$.

The control tire cost over (3) years = $100 \text{ trucks} \times 300,000 \text{ miles} \times \$0.11 = \$330,000$.

Difference of tire cost over (3) years = \$22,000

Versus the fuel savings with fuel efficient tires at 2% MPG increase = $\$131,200/\text{year} \times (3) \text{ years} = \$393,600$.

So what does all this mean? Over a three year period you will be paying \$22,000 more for your fuel efficient tires but the fuel savings at only 2% improvement gets you \$393,600 saved! It is obvious what the better decision is for your fleet.

Of course, if you do not maintain proper tire inflation the advantage in fuel economy will be dramatically reduced and may negate the added initial cost for the fuel efficient tires.

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