

TECH TALK

In our last mailer I discussed fuel savings and how to achieve them. One of the topics was rolling resistance with tires and the impact it plays on fuel economy. I received a lot of calls regarding how to compare tire brands and tread designs and how to calculate potential savings. There were also a lot of questions regarding tire price vs. savings. Well let's expand on this a little further this month.

Tire design, brand, application and tread life all play an important roll in fuel economy and tire price. First, tire manufacturers have many desired goals to reach when designing a tire. Long tread life, low rolling resistance, retreadability, traction and price point. These are customer desired attributes that each tire "should" have. In the real world there are trade offs. If you want a long tread life you may lose some fuel economy due to increased rolling resistance. This is also true of increased traction which can have an impact on rolling resistance. Low rolling resistance tires may have less aggressive tread designs and premium rubber compounds to enhance the tire performance, this results in a higher price tag.

My point is, tire design is a give and take proposal. There are a lot of factors to consider when determining which tire is best for your operation and budget. Tire price is not always a good bench mark for determining which tire is best for you, however cost is. A lot of operators are not sure how to determine tire cost.

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Let's take a look at tire cost. The chart below has some popular tires that are used in the St. Louis market. This chart breaks down the tires to purchase price, tread depth, projected tire life and potential fuel savings based on rolling resistance. It is important to note that the some of the data used in the chart is based on assumptions derived from information obtained from various truck operators in our market. There will always be variances in actual tread life, tire prices and fuel economy due to differences in truck types, operating conditions, maintenance and fleet size.

We can learn how to determine the actual costs and savings as pertains to your operation by following these simple steps:

1. Actual tire cost divided by actual miles of service gives you a cost per mile. Calculate steers separate from drives and add results together.
2. Tire cost per year is the cost per mile x the total miles driven per year.
3. Projected fuel savings can be determined by using Michelin's web site tool box which has a fuel savings calculator.

As you will see in the chart, the lowest priced tire is not always the lowest cost tire Just as the most expensive is not always the highest cost tire. If you want the best deal on tires, you need to do a little homework to determine what combination and brand will give you the lowest operating cost. It's not really that hard once you know how to calculate and compare tire costs.

Vehicle Set-up	BASE VEHICLE	Example #1	Example #2	Example #3	Example #4	Example #5
Steer tire brand	Firestone	Bridgestone	General	Continental	Yokohama	Michelin
Steer tire model	FS590	R287	S580A	HSL2	RY617	XZA3
Steer tire tread depth	18/32"	16/32"	18/32"	19/32"	18/32"	19/32"
Avg. market price	\$300	\$385	\$325	\$375	\$325	\$450
Projected tread life	120,000	150,000	120,000	150,000	120,000	150,000
Drive tire brand	Firestone	Bridgestone	General	Continental	Yokohama	Michelin
Drive tire model	FS690	M726-EL	D460	HDL-Eco+	703ZL	XDA3
Drive tire tread depth	29/32"	32/32"	26/32"	28/32"	32/32"	26/32"
Avg. market price	\$310	\$400	\$335	\$385	\$370	\$460
Projected tread life	250,000	350,000	300,000	320,000	350,000	350,000
Percentage fuel savings	0%	2.3%	2.9%	5.4%	5.6%	5.9%
Fuel savings (per year)	\$0	\$1870	\$2355	\$4308	\$4519	\$4726
Tire cost per mile	\$0.0149	\$0.0142	\$0.0143	\$0.0146	\$0.0135	\$0.0165
Tire cost per year	\$1788	\$1704	\$1716	\$1752	\$1620	\$1980
Tire cost per year less fuel savings	\$1788	-\$166	-\$639	-\$1709	-\$2899	-\$2746

In the chart above we used the following assumptions:

1. Vehicle is a 6 x 4 tractor in highway long haul operation
2. Vehicle runs 120,000 miles per year
3. Vehicle gets 6 mpg on base tires
4. Base tires are Firestone
5. Tire prices are average for the St. Louis market
6. No labor or other materials are included in the tire price
7. Savings is for one (1) truck and shown in blue

Your savings will be more or less depending on miles driven per year and your base average miles per gallon (mpg). Proper tire inflation, rotation, wheel alignment and maintenance will also effect the amount of savings. With good maintenance many operators will see longer tread life and additional savings in fuel and cost per mile than shown above. The bottom line is don't buy on price alone!

Cut cost not performance!

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