Help customers control their truck tire budgets by setting up a thorough evaluation process.

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One of the goals for every commercial trucking fleet is to keep the tire budget in check. The top maintenance cost next to fuel, after all, is always tires and retreads.

Fleets typically count on a dealer to recommend the best tires when it comes to the application – the best combination of removal miles, retreadability, traction and fuel economy. In general, that means the most cost effective new tire and retread on steer, drive and trailer wheel positions.

The best tire choice depends on the specific tractor make/model and service vocation. Every fleet is different and it is impossible to recommend a specific tire combination that is going to be most effective, unless a fleet runs its own internal tire evaluation. Just because Tire A worked best for Fleet A does not mean that the same tire will be a winner for Fleet B.

The only way for a fleet to judge if that new drive tire will really be successful is to run a serious tire evaluation. Understanding the basics of a tire evaluation is a real art and
takes a lot of hard work, not only to design a proper field evaluation, but to then go ahead and collect and analyze the results one, two or even three years after the test was implemented.

Before you can even think about starting a tire evaluation, it is really helpful to know your current tire performance baseline for each current tire make/model combination for the various axles. If some vehicles are running in line-haul service and travel coast to coast, then those tires will have a different performance baseline vs. the same tires running on vehicles in more local or regional service.

Treadwear measured in miles/32-inch, removal miles, casing retreadability and vehicle fuel economy data are the most important parameters. Removal miles are obviously important, and steps are going to have to be taken to get an accurate measure. Wheel-end odometers are the best option, or you can simply use the tractor odometer, provided that the tractor and trailer remain mated throughout the test (not likely) and that all 18 wheel positions start with fresh rubber (also not likely).

Even with accurate overall mileage, you can’t compare one tire design to another unless you have accurate treadwear data measured in miles/32-inch. A common error is for a fleet to forget that Tire A began with 30/32-inch of tread depth while Tire B started off with 26/32-inch. The common denominator is the number of miles gained per 32nd of an inch of wear. (And remember that you cannot run a tire down to 0/32-inch!)

Tire A might be great for treadwear, but if there are casing durability issues and it has a low retread success rate, that is critical information that will adversely affect the tire budget.

**Addressing Variables**

Everyone knows fuel prices are higher, and they have been that way for quite some time. So maximizing vehicle fuel economy remains an important consideration when determining which tires your fleet customer should be running.

Measured in miles/gallon, fuel economy is the other baseline that needs to be established before initiating a new tire evaluation. Even a 1% or 2% savings in fuel could offset price premiums associated with fuel-efficient tires. Dealers also have to look at balance; a more fuel-efficient tire may deliver lower removal mileage, but the savings associated with increased fuel efficiency could be enough to more than offset any losses in treadwear.

The key to designing a successful tire evaluation for your fleet customers is to minimize as many variables that could affect tire performance as possible. Vehicle make/model, aerodynamic features such as trailer side skirts/nose cones, routes, loads and driving style will all affect tire performance. It is best simply to choose one specific tractor and trailer combination that will typically travel on similar routes and conditions. Many fleets have what they call “dedicated runs,” which is the best group of vehicles for running a tire evaluation.

The big variable that can dramatically impact how a tire performs is the driver. A recent industry study showed that the driver has an 11% impact on the vehicle when it comes to
line-haul service and 35% on vehicles traveling in urban environments with excessive turning and braking. Every fleet has good and not-so-good drivers. It’s best to choose experienced drivers for a tire evaluation as they tend to be a lot easier on tires, especially in city vocations.

A variable that most fleets forget to consider is the weather. In the heat of the summer, tires will tend to wear out more quickly vs. during the winter. When you decide to initiate a tire evaluation, make sure all the tires in the test get mounted within a 30-day period to minimize this effect.

If the tire evaluation includes trailer tires, then life becomes even more challenging. Unless the tractor is married to the trailer, there will be different drivers pulling the trailers just about every day. The result is another variable that must be taken into account.

**Sample Size**

Let’s assume you have a solid historic baseline of tire performance for your fleet customer. You also have determined how important variables will affect the tire results and you have chosen a specific group of vehicles traveling under similar conditions to minimize those variables (as best as possible).

The next step is to come up with an evaluation sample size. How many vehicles (tractors/trailers) do you need to equip with the tires you want to evaluate to make any evaluation meaningful? The goal at the end of the evaluation, which can last two or three years, is to have a statistically sound result by which you and the fleet can make an intelligent decision.

According to the Technology Maintenance Council (TMC) of the American Trucking Associations, a sample size of 30 vehicles will give you a result that is statistically significant so that you don’t have to be concerned about the uncontrollable variables.

With smaller fleets, you will have to accept a smaller sample size and do the best you can to minimize the variables that can have a negative impact on real-world data.

One more thing: Before the tire evaluation gets underway, it also is a good idea to advise both drivers and mechanics. You want their buy-in and to get their feedback when it comes to tire performance. Their comments and observations are important considerations when determining if Tire A or Tire B is best for your customer’s fleet operations.

In addition, you will need them to make sure the test tractors and trailers are kept in the same condition throughout the test period as they were at the start, and that any significant mechanical issues that might impact the test are reported and accounted for.

You also will need to inspect tires throughout the course of the evaluation. This is very important, as tires may be damaged by a road hazard or may be sent out for a nail hole repair and be removed from the vehicle. Recording treadwear on a regular interval of every one or two months will ensure that you at least have the miles/32-inch treadwear data in case the tire disappears from service and is not available for final inspection and
measurements when it is worn out.

When the tires do come out of service and final measurements are recorded – including tread depth and wear appearance – the test is not yet over. Since just about every fleet retreads, these worn casings will need to be sent out for retreading. The fleet and/or dealer will need to work with their retreader to ensure that retread data is recorded on those casings. Whatever problems come up during the process, from initial inspection through curing, need to be detailed in reports.

As you can see, designing and implementing a successful tire evaluation is not as simple as installing a few tires and seeing how they did a few years later. It takes a significant amount of time, labor and money to really learn something from a tire evaluation and to help a fleet customer make the right purchase decision for its bottom line and yours.