

Testing, Testing 1,2,3

testing *How real-world testing of other people's products can pay off for you. (Not the mention the rest of the industry).*

By Deborah Lockridge

Bruce Stockton, vice president of Maintenance and Assets at Joplin, Mo.-based Contract Freighters Inc., recalls a tire test that his company did several years ago.

A tire vendor came to them with projections on a new tire that, if true, would make it a no-brainer to switch tires. "So we ran a few, and the early data told us the same thing—it held up really well," Stockton says.

But after further testing, they discovered that although the tire wore very evenly and was extremely durable, a higher rolling resistance caused a trade-off in fuel economy that negated the tire's other advantages.

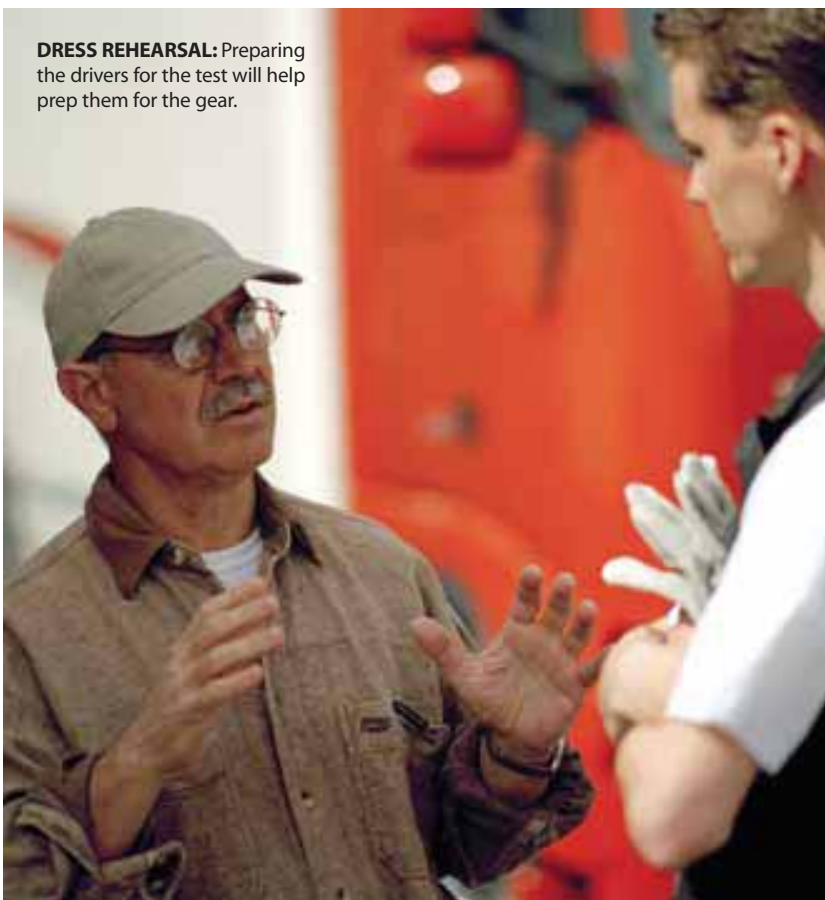
There is perhaps no better illustration of the importance of real-world fleet testing of products under development than the truck engines designed to meet 2004 emissions regulations.

Example B: Because of a lawsuit alleging that engine makers had put "defeat devices" on earlier engines, the deadline for implementing the new models was moved up 15 months, to October 2002. As a result, those engines did not have as much fleet testing behind them as the engine makers and the trucking industry would have liked. Once fleets finally got their hands on them, there were complaints about excessive under-hood heat on some models, fuel mileage that was worse than expected, turbos and EGR valves breaking down, and other problems.

Many of these issues were eventually addressed, but if there had been enough fleet testing, they most likely would have been fixed before the engines were put into full production.

At Detroit Diesel, for instance, the number of miles they were able to accumulate in real-world fleet testing for the 2002/2004 engines was a fifth of what they did for the 2007 engines, according to Chuck Blake, senior technical sales support manager.

Engines, tires, anti-idling options, bypass filters, electrical components, fuel mileage enhancers, safety technology, wheel seals, mobile communication systems, telematics, fleet management software—just about any component or accessory that goes on a truck or is used in



DRESS REHEARSAL: Preparing the drivers for the test will help prep them for the gear.

managing a fleet is tested in the real world.

In the IT world, it's known as "beta testing"—forward-looking customers test-drive a product and help the supplier get the bugs out before it is released to the general public.

For instance, the Wisconsin-based compliance experts J.J. Keller&Associates are currently launching FleetMentor, a web-based management tool targeted at

small fleets. FleetMentor is designed to provide back-office web help for large and smaller operations that will eventually enable managers to track their trucks, trailers, personnel and virtually all other aspects of the operation online.

It's not up and running yet, and Keller has not yet pinned down how much one of these virtual v-p's would cost, but meantime, fleet managers as well as truck-magazine editors (including the staff at *Today's Trucking*) were invited to go to the site, www.fleetmentor.com, to sign up for a beta test of the new service. That started in January.

According to Jacqui Jurmu, design manager for the site, the beta test will run for four to six months. After the test, fleet users will get a 30-day free trial before the subscription service begins. The beta test will allow site designers and editors to iron out any wrinkles that crop up as real fleets use the service in day-to-day operations.

Real world tests offer the "where the rubber meets the road experience."

In Gear

“There’s no way you can imagine everything a driver can put something through and then duplicate that in the lab,” says Walter Madsen, beta testing manager at Xata Corp., which offers fleet-optimization tools featuring both in-cab hardware and web-based software.

The fleet experience often catches situations that supplier testing did not, says Detroit’s Blake. Although an engine is tested on stands in test cells, on test tracks and on test trucks operated by the truck and engine makers in a variety of conditions, “real world miles always add a new dimension.”

For instance, he explains, for the 2007 engines, they spent months testing the engines in the desert, at high altitude, and in the extreme cold of one of our Canadian winters. But in fleet testing, a group of trucks got caught in a once-in-a-century snowstorm in Denver and idled for three days, plugging diesel particulate filters. “Nobody ever dreamed they’d be idling for three days,” he says. “It was almost comical.” But it exposed an area that could be improved before the production date.

And, of course, getting test products into major fleets is a marketing strategy, as well—“try it, you’ll like it.” If a fleet likes what they see during the testing process, they’re more likely to buy the technology when it comes on the market. “If we put our system on a truck, we will have a sale,” says Jerry Cook of Ecotech, which makes a device it says improves fuel economy.

THE INSIDE TRACK

Being a tester of pre-production products offers several advantages to fleets. The biggest one is that if the new technology works well, you’re among the first to reap the rewards.

Pre-production testing also gives fleets a better idea of any challenges they may face in adopting the new product or technology, whether it’s additional maintenance procedures, lower fuel economy or driver acceptance.

Sometimes, drivers don’t want to deal with new technology. If your fleet has done the testing, you’ll already know what kind of selling job you have on your hands.

Fleets also like to know that their input is making a product better.

For instance, Xata added PTO functionality to its latest version. While the feature worked exactly as expected in the test fleets, these beta testers gave them feedback allowing them to improve the reporting feature, allowing fleets to monitor active PTO time versus idle time.

TESTING HEADACHES

That sneak peek at what’s coming down the pike doesn’t come for free, however. While most suppliers provide the tested product for free and may help in providing maintenance, there are other issues.

For one thing, pre-production units are not quite ready for prime time, so they may break down more frequently.

“In the worst case, the component may cause progressive damage to other com-

ponents or systems on the truck,” says Dennis Damman, director of engineering for Schneider National. “So we try to evaluate the risk before agreeing to any evaluation or testing.”

Or the supplier may want you to pull the truck off the road so they can evaluate how the product is doing, or make a change to it.

Even if everything works perfectly, it takes time and manpower to accurately run and monitor testing. You need to be able to keep track of which trucks have test components on them, and maintenance personnel have to know what they’re supposed to do if they fail. You may need to track consumables such as fuel and oil that were used on the test trucks.

Fuel economy testing is probably the biggest headache of all. It is very difficult to account for all the different variables that can affect mileage—equipment specs, speed, load, route, weather, driver, tire wear, cross-winds, etc.

There are some very specific test protocols that are used in fuel economy testing. SAE Type III testing, for instance, involves short runs, about 40 miles, using portable fuel tanks. A Type IV test, Weber says, is a more real-world test, but still involves a set, fairly controlled route of about 500 miles. It takes longer to run and to understand the results than the Type III test. Several large fleets have set up these types of test runs, he says. U.S. Xpress, for instance, has a route in the Chattanooga area they use for testing several times a year.

Managing a fleet. It's one mean puzzle!

Let us assemble the pieces for you.

Brossard Leasing undertakes all aspects of fleet management, both administrative and technical. No other truck and trailer leasing company offers such expertise and vast range of services.

You will never again have to trouble yourself with the maintenance and repair of your transport fleet. All is included, from engine oil to the tires! In the event of a breakdown, we guarantee vehicle replacement within 4 hours.* We are on call 24 hours a day, 365 days a year.

Nobody does more to make sure that all the pieces fall into place.

* Inside specified geographic zones.



WHAT MAKES A GOOD TEST FLEET?

So, you think you'd like to try testing some products? First, you have to keep good records. You can't just put the test unit on and forget about it. Suppliers are going to want to know about breakdowns and malfunctions. A fleet that scrupulously managed breakdowns, for instance, is going to be valuable as a tester.

Size certainly is a factor. A single truck does not make for a scientifically valid test sample. Depending on the product and the test, you might want anywhere from five to 50 units devoted to the test.

Location also can be an issue when setting up a test. For instance, early testing of 2007 engines involved making sure there was a source of ultra-low sulfur diesel fuel. And during fleet testing of the engines, Detroit Diesel made sure the dealers and distributors in the areas and routes where the test trucks were running were the first to get training on the new engines.

Communication between the fleet and the supplier is key.

"I look for engaged management, engaged users, people that actually use the system," says Xata's Madsen. "I want someone with some enthusiasm."

You also need to be able to gather driver feedback, both for manufacturers and for your own evaluation.

Schneider's Damman says while the ability to get instantaneous data via telematics helps in running tests: "You still need to get the driver's input. A lot of times you think you've got something the drivers are really going to like, and you find out you interpreted

that wrong. That's something that telematics isn't going to give you."

Depending on the situation, suppliers or fleets or both may ask the other to sign a confidentiality agreement of some sort regarding the testing.



GOOD RECORDS: You won't be called if your data collection is faulty.

If you enter into an agreement with a supplier to test a product, make sure both parties have a clear understanding of how the test will be conducted, and what the expected results are going to be within a set period of time.

Some of these challenges prompt OEMs to do a sort of hybrid test—using real-world equipment provided by fleets, but handling the actual testing themselves. For instance, ABF Freight System allowed Detroit Diesel to conduct controlled fuel economy testing of the new 2007 engines using its equipment for a couple of days. "It gives them an opportunity to find out if their engineering's working and kind of do some real-world testing," says Rick Preston, director of maintenance.

Depending on what's being tested, the

actual test protocols could vary greatly. The duration of a test can vary from a day or two to several years. SAE Type III fuel testing may take just a day. A software update might take a few months; software with an entire new functionality might take a year. Testing tires for wear over the life of the tire could take two or three years.

Finally. Be warned. If you're good at this, you'll quickly develop a reputation for being a lab on wheels. Fleets that become known for testing get approached

frequently by all types of companies.

"We get calls letters, e-mails, and personal visits from people wanting us to test something at least once a week," says CFI's Stockton. "The type of testing we've done is typically driven by an area that we've identified as a problem or a high-cost area for us."

As Schneider's Damman puts it, "There needs to be a business case for the product... an opportunity for payback or driver enhancement or a future mandate requiring implementation of technology." ▲



Network member





Montreal 1-800-361-9720 • Quebec City 1-800-397-2433 • www.brossard.com • www.flash24.ca