

TACKLING TIRES

Training, maintenance and software pay big dividends

After two years of trade school a good mechanic will know a lot about engines, hydraulics and transmissions. But where do they go to learn about tires?

In most cases – nowhere. Tires aren't taught in vocational schools, and given what they cost you, that's unfortunate. After fuel and operator wages, tires are often the largest single operating cost for a piece of equipment. What's more, having the right tires in good condition will boost productivity and fuel economy, reduce downtime and improve safety.

To realize these benefits you need a tire program with monitoring, maintenance, and in many cases tracking software. But rather than take the time to become a tire expert yourself you can usually tap into resources provided by your tire dealer.

Sign up for tracking

Most of your major tire vendors now offer tire tracking software. "We track everything about the tires from the cradle to the grave," says Chris Rhoades, TreadStat product manager, Bridgestone Americas Tire Operations, off road division. "Tire performance, tread depths, air pressure, rotation schedules, retreads, visual comments, percent utilization – everything up to their disposition as scrap. With the tracking software you can drill down using any metric."

And good recordkeeping brings numerous benefits, short and long term. "If you know why your tires are failing early you can put in counter measures," Rhoades says. "If you are experiencing a lot of sidewall cuts you know that your haul roads aren't wide enough. If you're getting a lot of tread cuts, the dumping and loading areas probably need to be cleaner and better maintained."

Longer term you can look at inventory and asset reports from month to month and generate budgets and plan acquisitions, Rhoades says. By charting the actual life of the tires you get an accurate idea of your expected tire life and your true tire costs. You can also plan tire purchases and replacement schedules to avoid unexpected downtime or having to interrupt operations in the middle of your busy season.

Software can also help you compare cost and value. A more expensive, high quality tire will usually prove the best value in the long run. But if you're running in harsh applications where the tires are more often destroyed than worn out, then a less expensive model may be a more cost effective solution.

Some jobs are tougher on tires than others, and with good records and damage documentation a contractor puts himself in a better position for accurate bids going forward, says Steve White, Michelin earthmover market segment manager –

construction.

Contractors with just a handful of machines may not need the sophistication of tire tracking software. But don't fool yourself, Rhoades says. "A lot of people think they can hold more stuff in their head than they really can," he says. "If you ask them how their tire performance is they'll answer 'great,' but ask them if they know their cost per hour or what percentage of their tires came out early and they don't know. Everybody assumes they're doing OK, but when you actually have the data, you can begin to start improving it."

Data entry on tire tracking programs can be done by anyone, Rhoades says. But about 90 percent of the time it's done by the dealer. If your dealer is servicing the tires, his technician can record the data on each service call and keep records more accurately than can operators or your mechanics.

Tire maintenance

"The better a contractor's tire maintenance program, the more they will maximize their cost per hour," says Pete Kearney, OTR sales and marketing, southeast for Titan International.

Periodic maintenance should include air pressure checks, measuring tread depth and visual inspections of the tires for damage and inspections to make sure the



A tire tracking software program compiles data on tire use, maintenance and condition and helps you establish accurate costs and plan for inventory and replacement schedules.

tires are all the same diameter. Air pressure checks are the number one item on every tire expert's list. "Running under-inflated or over-inflated is the death of any tire," Kearny says. "It will ruin the integrity of the casing."

A contractor should have his operators trained and checking the air pressures

up an air pressure maintenance program, with all these elements in it and all your operators and technicians informed and onboard.

"The operators are the key factor in both production and tire performance," says Aaron Murphy, vice president at Double Coin Tire. "Many companies

your dealer for tire service you can concentrate on running your business, and your fleet technicians can focus on mechanical maintenance and repair.

There are also safety considerations, especially with OTR tires that can require air pressures as high as 100 psi. White says he has talked with fleet managers who after seeing tire explosions were hesitant to have their guys working on tires.

The level of service you need depends on how many machines you have and how hard you work the tires. Regular inspections and monitoring should be a part of this service. For a small contractor this could be quarterly or twice a year for all of your machines. Larger fleets may need to schedule tire service on different portions of their fleet as often as once a month.

Another benefit to subbing out the service is that a tire technician can do his work in the evenings or Saturdays or Sundays to keep from slowing down a contractor's busy production schedule, says Roger Best, senior field engineer at Bridgestone Americas, Off Road Tires.

Having an expert eye on your tires may come in handy if you work at or are bidding on jobs at refineries, chemical plants or anywhere that a tire explosion could cause a destructive chain of events, Best says. "A lot of these places will only let

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Letting the air out – A 10 percent difference in tire pressure over or under the manufacturers recommended pressure can result in a 20 percent decreased tire life.

Source: Bridgestone Americas, Tire Operations, Off Road division.

regularly rather than wait for the tire vendor's service tech. Proper pressure allows the tire to operate more correctly for traction and heat generation, says White. It allows the tire to more efficiently roll over obstacles and conserves fuel and tread life. A contractor should have his operators trained for visual inspections of air pressure between his regular pressure checks by either his maintenance crew or the tire vendor. This could give a quick indication of any issues.

Part of this training should include teaching operators and supervisors not to exceed a machine's limits, says White. This means maintaining the proper speeds rather than racing to the dump site, not putting too much material in the bucket, or adding sideboards to a truck to allow overloading. These things are often done to increase productivity, but the equipment and tire damage and downtime that result can cost more than the increased productivity is worth.

Make sure operators know to check pressures with the tire cold, and for most earthmovers, with a big bore pressure gauge. They should also know that different loads require different tire pressures. Most tire experts advise setting

offer incentives to keep operators motivated to maintain tires and equipment. Operators play an important role in making sure haul roads and pit areas are maintained, which eliminates premature failure due to cuts."

Sub out the big stuff

Aside from the operator's daily checks, when it comes to service and in-depth inspections and maintenance consider partnering with your tire vendors. The vendors' tire service technicians know more about tires than mechanics, and tire service trucks are specialized pieces of equipment that don't make sense for most contractors. By contracting with

Retread solution – In any OTR tire program you should seriously consider retreading. It depends on the application but many companies remove tires with approximately 15 to 20 percent of the tread remaining to have them retreaded says Aaron Murphy, vice president, Double Coin Tire.

Retreads can often give you the same performance as a new tire at approximately half the cost. But certain types of damage and wear will render a tire incapable of being retreaded. Consult with your tire dealer to see how you can save money with retreads.

When operators are trained in the value of clean loading areas, their tires are less likely to suffer from rock cuts and early failure.



Destructively different diameters – With the thick treads found on many earthmoving machines it's not uncommon for the tires to slowly wear down to different diameters. The equipment OEMs have specs as to how much inequality in tire diameter is allowable. But running a machine beyond those specs can damage axles, transmissions and driveline components. Professional tire technicians are best equipped to measure and evaluate tire diameters in these situations.

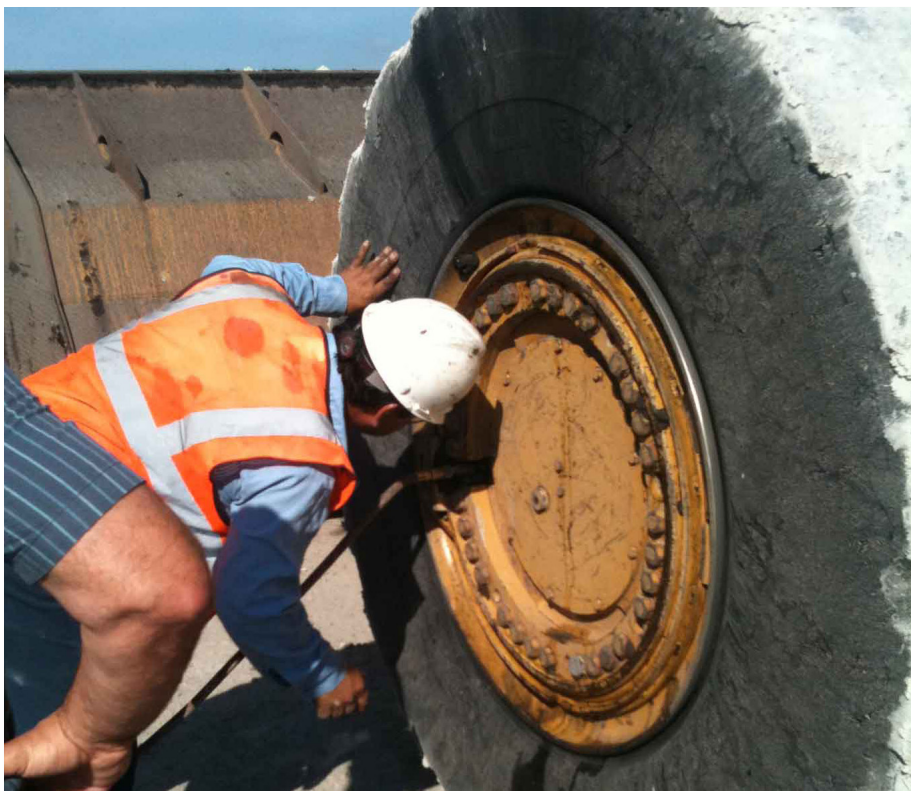
you run new tires, no retreads or repaired tires, or anything with the potential to fail," he says. And there are machines such as telehandlers that may need more frequent tire inspections as a blowout on one of these could endanger the safety or lives of workers in a platform or near the material being lifted.

Take time for training

"The mobile equipment superintendent is educated on every aspect of equipment except the tires, says Kearny. "So a lot of the larger contractor companies are partnering with their tire companies and doing tire training," he says.

"We bring them in and talk to them about many of the aspects of tires," says White. "It's generic training, for two or three days. We often bring in a customer with his dealer. We talk about the importance of air pressure, maintenance, inspections and how to look for damage. We have tires with specific damages we show them and we ask them to guess how the damage occurred."

Two or three days of tire training won't make you an expert, but it will give you the fundamentals you need to be a better tire consumer and knowledge you can take back to operators and mechanics to develop a tire program. You can also bring back a lot of good tire safety material for your safety meetings, Best says. "We push for at least a once a month talk on tire safety," he says. It's not just about making tires run longer, but run safer too."



Regular visual and air pressure checks by operators and tire technicians are key to maximizing the longevity of your tires and preventing unplanned downtime.