

Keeping Fuel Costs Down

With prices at the pump hovering around \$3/gallon, diesel costs are eating into everyone's profits. Yet most operators could cut their fuel consumption by driving more efficiently, operating smarter, and by upgrading to more cost-effective equipment.

Driving Smart

If anyone knows about driving smart, it's tractor-trailer drivers. They're on the road all the time, and coaxing an extra mile or two per gallon out of their rigs can spell the difference between dining on hamburger or steak.

"The right driving habits can add from 1 to 1.75 mpg," says James Weaver, a senior driver trainer for O & S Trucking, Inc., a full-service trucking company in Frankville, Miss. He and James Pollitt, an owner-operator from Tollesboro, Ky., offer three simple suggestions.

Do the Maintenance. It sounds obvious, but proper maintenance makes a big difference in fuel economy. Just having the proper tire pressure will boost your mileage. The same is true of proper alignment. Engine maintenance, such as tune-ups and changing oil and air filters, is also important to running smoother and more efficiently.

Slow down. "Speed is the biggest factor in saving fuel," says Pollitt, who usually runs his rig at 58 mph to 62 mph.

Weaver agrees because he can see the difference while he's driving. Some tractor-trailer cabs now come with mileage computers, he explains. Drivers key in a target mileage, and the computer shows if they are above or below the target. "If you're cruising at 60 mph and you slow down even 1 mph, you'll see the indicator move to show you're saving fuel," he says. "The faster you go, the harder you push against the air and the worse your fuel mileage."

Predict. Even when they're not moving forward, trucks burn fuel while stopped and idling. "We teach our drivers to look ahead and predict what is going to happen," says Weaver. "If they

can predict when a light will change, they can roll through the light rather than come to a dead stop and then have to waste fuel starting again."

Operating Smart

At the worksite, operators can take several steps to improve fuel economy, says Guzzler strategic accounts specialist Phil Stein.

Do the maintenance. Vacuum trucks operate at peak efficiency when they are not fighting themselves while doing their job, so be sure to do periodic maintenance. This includes carefully inspecting seals and gaskets, cleaning or replacing filters, lubricating moving parts, testing the hydraulic system, and servicing the engine.

Find a comfort zone. "Anything the operator can do to lower RPMs and inches of mercury will help to conserve fuel," says Stein. That starts with proper job setup.

In difficult applications, warns Stein, some operators run at or near "wide open" to try to solve problems with more RPMs and horsepower. For some materials, such as fly ash, this actually lowers productivity while burning far too much fuel.

"By understanding hose sizing, air flow, and blower operation, you not only save on \$3/gallon diesel but also reduce wear on your machine, hose, and hose handler." (You can read Stein's thoughts on conveyance speeds in the September 2006 issue of *The Edge*.)

Yet lower RPMs should not be the only goal. Running too slowly can cause lugging, combustion timing problems that happen when RPMs go too low. This burns excessive fuel and also causes engine damage. The key, says Stein, is to find the right comfort zone for the application.

Avoid idling. "One thing that has always been a problem is the amount of time the chassis engine is left idling when the unit is not actually working," says Stein. "Many times the blower is also running.

"During turnarounds and outages," he says, *continued on page 3*



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Subsidiaries of



What to Expect from Your Accountant

Everybody knows what accountants do. They reconcile the books and handle payroll and taxes.

Yet good small-business accountants go beyond these basics. They not only collect and organize data, but interpret it so they can advise business owners on ways to grow, reduce taxes, get better terms on loans, retire in comfort, and dozens of other critical tasks.

These services are especially important for family businesses, says Mark Koziel, who specializes in privately owned companies at the American Institute of Certified Public Accountants (AICPA).

“For a family business, it’s not just about putting plans and controls in place, but finding what the owner really wants out of the business,” says Koziel. “If the business revolves solely around the owner, you don’t have a business, you have a job. Accountants can help create systems that separate the two, so it’s really a business.”

Teamwork

Small businesses should consider accountants part of their management team, says Robert Fukuhara, Jr., president of the National Society of Accountants. “You should call your accountant any time you do anything of financial significance, such as buying equipment or signing a lease,” he says.

Even if you are a great negotiator, accountants work with many companies, Fukuhara explains. They are usually on friendly terms with several banks and lenders. As a result, they may know who offers the best combination of rates and terms for a specific business. They can also help analyze how financing will affect cash flow and profits. “Talking to your accountant will give you more options,” says Fukuhara.

Accountants can also help with business planning. “They can help you formulate a five-year business plan for growing your business, and project earnings and spending on equipment, employees, and other essentials every step of the way,” says Fukuhara. “They will also review that plan periodically to see if you’re on track.”

Accountants can also boost profits through short-term tax planning. “Accountants generally like to review financial statements after nine months to estimate tax liabilities,” says Fukuhara. “By the end of the year, it’s too late to do anything. But with three months to go, they can probably save the business some money.”

Many companies rely on their accountants for an objective view of their performance. Comparing financial ratios (such as debt to asset or cash flow to income) with those of similar businesses can determine areas for improvement. Accountants can also flag early warning signs of future business problems.

Control

Large businesses tightly control how funds are handled. Small contractors are usually less formal. Most small companies would benefit from tighter controls over their bookkeeper, says Koziel.

“If one bookkeeper is doing it all, what insurance do you have that this person is not careless, maybe paying twice for the same services, or even committing fraud,” he asks. “Controls give you outside insurance that your system is working.”

Controls often go hand in hand with computers, accounting software, and, for larger companies, networks. “Accountants can set up the bookkeeping software so that only owners or managers can edit entries or make payments over a certain size,” says Koziel.

Many small businesses are family-owned. That means business and family decisions are often intertwined, Koziel continues.

Some issues crop up frequently. The rules covering business benefits, from health insurance to company cars, are often complex. Owners frequently put all their energy into growing their businesses and may neglect their own retirement planning or college savings for children. Frequently, family firms stumble with formal succession planning, deciding whether to have a family member take over a successful business or sell out.

Accountants can help set up plans, provide options, iron out problems before they come up, and even restructure a business to meet family financial goals.

“Accountants have a wealth of experience working through these issues because they work with many different firms,” says Koziel. “What they see in one industry may work in others. They really can do more than prepare reports and pay taxes. They can act as trusted advisors.”



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Spring Once-Over Readies Equipment for Hot Weather

Guzzler and Jetstream equipment are made to perform during the hot summer months, says Guzzler service manager Tracy Krebsbach. Yet contractors should schedule a top-to-bottom spring inspection to get ready for summer and fix any ongoing issues before they turn into problems. "If you do that, you'll have more uptime," he says.

Mechanics should pay special attention to the cooling and hydraulic systems in hot weather.

Coolant. It is easy to pop the hood and check coolant every morning, says Krebsbach. Yet operators must stay alert during the day because slow leaks can drain a radiator.

Operators should check the heat gauge periodically during the day. If a Guzzler overheats, the safety system will slow the engine to an idle. This is a warning, so don't ignore it. Check engine temperature, and coolant and oil levels to see if that's the problem.

Hydraulics. Hydraulic systems are vulnerable when ambient air temperatures rise to 90° F – 100° F and above. "Hydraulic oil temperatures rise one degree with every degree rise in ambient air. If your oil temperature is 160 F at 80° F, it will jump to 190° F when it's 110° F," Krebsbach explains.

At 190° F – 200° F, hot oil can cause pumps and valves to expand like a jar lid under hot water. That reduces efficiency. Heat also breaks down oil and seals faster.

The Guzzler Classic and ACE are unlikely to see such high temperatures because they use

hydraulics only when they dump loads. The Guzzler NX and Vactor HXX use more hydraulics and should be monitored for oil overheating.

Some machines use air-to-oil heat exchangers (which look like radiators) to cool hydraulic oil. Mechanics should make sure heat exchanger fans turn on when oil temperatures reach 130° F. They should also make sure the engines drop to idle if oil temperatures rise above 190° F.

In the field, operators should take action to make sure oil temperatures never rise above 190° F.

When working in consistently hot weather, mechanics should consider using hot weather AW68 hydraulic fluid and changing fluid at recommended intervals or more frequently, says Krebsbach. Mechanics should use only absolute-style oil filters, which keep oil cleaner than cheaper nominal filters.

Finally, says Krebsbach, inspect the rig each day. "You may have checked yesterday morning, but if a leak developed since then, you won't know it unless you look," he concludes.

Jetstream. Waterblasters almost always perform well in hot weather. On rare occasions, heat can cause vapor lock or fuel foaming. Moving the unit into the shade and purging the air from the fuel injectors fix the problem, says Jetstream service manager Tom Kelley.



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Keeping Fuel Costs Down – continued

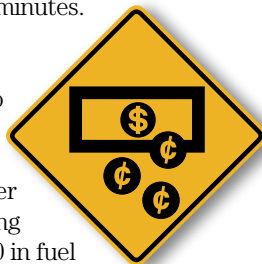
“you can spend 10, 15, or even 30 minutes waiting for a welder, boilermaker, electrician, or another craftsman to do something in the work area.” His solution is simple: Ask how long it will take and shut down if it is more than two or three minutes.

Buying Smart

Another way to save on fuel bills is to upgrade to more fuel-efficient equipment, says Guzzler product manager Deepesh Nayanar. He points to the Guzzler NX as an example. Depending on operating conditions, an NX could save up to \$6,000 in fuel annually compared with a new Guzzler Classic and up to \$5,000 compared with a new Guzzler Ace, two models that are already fuel-efficient when compared with their peers.

The difference between a new NX and an older vacuum truck would be even greater, says Nayanar, since older units grow less efficient over time.

The NX reduces fuel use two ways. First, its high-speed



blower lets operators pull the same vacuum at lower engine speeds that use less fuel. Until now, Nayanar says, blowers ran at the same speed as the engine. For a blower to run at 1,800 RPM, the engine had to run at 1,800 RPM. The NX blower operates at a 1:1.8 ratio, so the engine only has to run at 1,000 RPM to drive it to 1,800 RPM.

Lower engine speeds achieve big-time fuel savings. Running full out, the NX blower uses 9% less fuel than a Hibon 8702 blower and 21% - 23% less fuel than a Roots Trinidad on a similarly configured vacuum truck, Nayanar estimates.

At 3,200 cubic feet per minute, he estimates the NX uses 7% less diesel than a Hibon and 16% less diesel than a Trinidad.

The NX also has a vacuum recovery system. It keeps the bag house from getting plugged by blowing out the filters during operation. This lets operators fill the truck to 75% - 80% capacity (compared with about 50% in conventional units), so they can make fewer trips to dump material. “The fuel savings may not be great if you're dumping nearby, but you're certainly a lot more efficient if you don't have to stop so often,” says Nayanar.

Call 811 to Mark Utilities

You call "911" when you need emergency help and "411" when you need a phone number. Now you can call "811" when you need to get underground utility lines marked.

Best of all, the new 811 service is free and it eliminates having to contact all possible local utilities.

Just call 811 a few days before you're ready to dig. The system automatically routes your call to the One Call Center in your area. You give the operators the location of the dig, and they contact all relevant utilities. The utilities then dispatch professional locating crews to mark the lines before you start.

Marked lines show the approximate location of underground gas, electric, phone, fiberoptic, cable, water, and sewer lines. At best, accidentally cutting one of those lines while working on a project could leave you with significant fines

and repair costs. You could disrupt service to an entire neighborhood (not so good for your company's image). At worst, an accident with a gas main or electrical conduit could injure or kill workers.

More than 60 states, counties, and cities already have a local "one call" number. Their services will remain the same. The only difference is that now you can reach them either through the old local one call number or by dialing 811.

The 811 number simply eliminates the confusion of having to make more than one call. It is especially useful for contractors who work in several states or in regions served by an array of different utilities.

811 reduces your risk when working around underground utility lines and makes it easy to comply with "call before you dig" laws. And it is as easy to use as dialing 411 for information.



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