

the actual results. The best drivers also drive in top gear or cruise control whenever they are on the highway, taking care to drive the speed limit to maximize engine efficiency and use of fuel.

Get the Facts about Fuel

Joe Bellman, co-owner of Bellman Oil in Bremen, Indiana, offers these tips for lowering your fuel costs:

- Use quality fuel, especially when the weather gets cold. While it costs more up front, good fuel doesn't need as many additives to prevent thickening as lower quality fuel does when the temperature drops. For instance, BP sells a premier diesel fuel that has a cloud point of five degrees, versus a lower quality fuel which may only have a cloud point of fifteen degrees. Quality fuels also have more BTU's for more power.
- Use synthetic lubricants. Oil companies such as BP, Chevron, and others have premier lubricants that reduce fuel economy by making fuel readily available to the engine. When temperatures are twenty degrees or below, or you know your route will take you to colder climates, it's time to start adding lubricant. Bellman recommends adding it until April, just to make sure that you keep your unit running smoothly.
- Remember to maintain your truck. Oils have improved, so it's possible to go longer between oil changes. However, while you may think that skipping a visit to the garage will save you time on the road, a missed maintenance visit could actually lead to more down time if your fuel has gelled and you are sitting on the side of the highway.
- Don't mix kerosene, or #1 diesel, with regular fuel to lower the cloud point. This used to be a common practice, but with the quality of the additives available, it's no longer necessary.

You can cut your fuel costs.

Apply these seven strategies and watch your fuel costs go down. Remember, though, that new trucks will initially have lower fuel economy because of the break-in period for an engine. Most agree that engines require between 25,000 and 50,000 miles to properly break-in.

Learn the Advantages of Aerodynamics

- Seek out trucks with improved aerodynamic performance, such as the International ProStar. Or, if you aren't planning to purchase a new truck this year, invest in aerodynamic treatments such as side extenders, skirts, or roof deflectors. Shorten the gap between the tractor and the trailer by moving the fifth wheel forward. Each 2% improvement in drag results in 1% of fuel economy increase.
- Drive the speed limit. "As a vehicle's road speed increases," says Kevin Gerber of Cummins, "so does air resistance and rolling resistance. Thus, the power required to move the vehicle down the road increases. As a rule, for each 1 MPH above 55 MPH, mileage decreases by 0.1 MPG." The difference between an average of 60 MPH and 70 MPH equates to 1.0 MPG difference in fuel economy.

Educate and Reward Your Drivers for Best Fuel-Saving Practices

- Encourage your drivers to save fuel by adopting these driving habits: avoid sudden stops or accelerations, coast to a stop rather than slamming on the brakes, and use progressive shifting.
- Use available technology, such as Cummins Load Based Speed Control, a patented electronic feature that manages the allowable speed range of the engine, based on the vehicle's effective mass and operating conditions. The feature basically mimics the characteristics of a fuel efficient driver and encourages more efficient driving habits.
- Encourage your drivers to see their role in improving fuel economy. Explain how much a 5% improvement can mean to the company and link the savings to driver incentive plans. Cummins was recently awarded a patent for an engine control system that rewards the driver with increased allowed speed if he wears his safety belt and follows other fuel-efficient practices such as driving in top-gear or using cruise-control.
- Avoid excessive idling. If you're trying to keep the cab warm, select the lowest idle speed possible—no higher than 800 rpm. Most long-haul operations are combating excessive idle times by equipping their units with auxiliary power units (APUs). APUs are also necessary as states increasingly pass stringent anti-idling regulations. Pick-up and delivery applications can eliminate excessive idle time by programming the truck's electronic control module to shut the truck off after a predetermined amount of idle time (usually 10 to 15 minutes). This will prevent drivers from idling during lunch hours or long stops.
- Frequently check your electronic control module (ECM) data. The ECM maintains an electronic log of vehicle performance and provides great insight into driver performance.
- The best drivers spend 90% of their trip in top gear, 5% of their trip in "next to top gear", and 5% of their time in the remaining gears. For a ten-speed transmission, that equates to 90% in 10th gear, 5% in 9th gear, and 5% in gears 1-8. ECM data can report

Get In Gear

“Gearing the truck correctly during the spec’ing process is crucial,” says Kevin Gerber, Automotive Account Manager at Cummins Crosspoint LLC. “You can spec the gearing so that the engine runs at the ideal rpm. Every engine is a bit different, so the ideal rpm for one isn’t the same for another.” To fine-tune your fuel economy, make sure you:

- Gear your truck properly. Improper gearing means higher rpm levels, requiring more fuel. As a general rule of thumb, engine rpm should be 60% of maximum engine rpm during cruising speeds. In other words, if your truck engine is rated for 2,200 rpm, then it should be running 1,320 rpm driving down the highway at normal highway cruising speed. Remember, gearing is a function of engine rpm, transmission gearing, and rear-axle gearing.
- Consider automatic or semi-automatic transmissions. Transmissions substantially impact fuel economy, and automated transmissions should be given real consideration during the spec’ing process. Substantial evidence indicates that today’s automatic transmissions can improve the overall average fleet fuel economy to levels near your best driver. How? Your most fuel-efficient driver is likely shifting his truck at optimal rpm levels. Automatic transmissions eliminate drivers from having to make these decisions, resulting in optimal shift points and better fuel economy.

Get Tires that Improve Your MPG

- Learn the advantages of ribbed v. lug treads. According to the Cummins MPG Guide, published in 2003, tires make the biggest difference in MPG below 50 MPH and aerodynamics is the most important factor over 50 MPH. The tires with the best fuel economy are worn ribbed tires; while worn lug tires get more MPG than new lug tires, ribbed tires are by far the best in terms of fuel economy, especially after they’ve been broken in. Worn tires improve fuel economy up to 7% over brand new tires.
- Monitor tire pressure. Ensure tire pressure is within manufacturer’s recommended specifications. Fuel economy is reduced by 1% for every 10 psi of under-inflation. Don’t wait for the quarterly preventative maintenance appointment to check air pressure; remember that air temperature affects tire pressure and performance, and that affects MPG. Consider equipping each wheel placement with tire inflation monitoring systems like Link’s Cat’s Eye (www.linkmfg.com), which allows drivers to check tire pressure conveniently.

Schedule Regular Maintenance

Schedule regular, complete preventative maintenance, including air filter, fuel filter, and fuel water separator checks and engine tune-ups. Something as simple as an over-aged, dirty air filter could be to blame for poor engine performance and poor fuel economy.



Seven Strategies That Will Lower Your Costs

Cutting your fuel costs have just as much to do with careful spec'ing, maintaining, and driving your truck as the price at the pump. Here are seven ways to be fuel-efficient:

- Spec for success
- Get in the right gear
- Check your tire pressure
- Schedule regular maintenance
- Learn the advantages of aerodynamics
- Educate and Reward Drivers For Best Fuel-Saving Practices
- Get the facts about fuel

Spec for Success

Fuel costs are rising; for the best fuel economy, choose the right truck for your application. For instance, if you need a truck for strictly on-road applications, buying a used unit that was spec'd for both on and off-road use could cost you substantial fuel mileage. Even small specification differences will impact your costs. Purchasing a truck from dealer stock or because it is "priced right" might seem like a good idea now, but you will have to live with performance and fuel economy issues for a long time.

Take a few minutes to research and document how you intend to use your truck throughout the course of a day. Ask yourself these questions:

- What is the average daily payload or combined gross vehicle weight?
- How many stops will the truck make in an average day?
- How many miles will the truck run in an average day?
- What is the expected average speed?
- What is the expected driver turnover rate?

This information will help truck sales professionals achieve optimal specifications, increasing fuel economy and up time, while lowering maintenance costs.

Be open-minded when purchasing your next unit. Many truck buyers have preconceived notions regarding the optimal specifications based on their experience with existing equipment. Technology, government regulations, and advancements in design continue to drive change. The gear ratio that worked so nicely in the 1999 day cab probably isn't the optimal set-up today.