



# Lowering Costs by Customizing New Commercial Vehicle Purchases

*By George Sharpe*

## **Introduction:**

In the past, trucks were viewed merely as a means to an end: as little more than a container used to transport goods from Point A to Point B. The result of this perspective was a lack of available options for vehicle customization. A fleet owner would simply go to a truck dealership, select the vehicle that conformed most closely to his needs, and purchase that vehicle off the lot.

Today, truck manufacturers realize that in an increasingly competitive trucking industry, a one-size-fits-all approach to the commercial vehicle market does not adequately meet the needs of trucking operations. Consequentially, hundreds of options are available to fleet owners when selecting a new truck. In the modern marketplace, the motor carriers that are the most successful are those that take full advantage of the options offered by truck manufactures, customizing their new vehicles to meet the specific needs of their businesses.

The fleet is the backbone of any trucking operation, and a well-selected fleet is integral in maintaining a competitive advantage in the industry. A custom fleet can significantly increase value, efficiency, productivity, safety, longevity, and driver retention; and, because customization is often offered at little to no cost, there isn't a good reason to forgo many of the options that truck manufacturers offer.


## Value

When buying a new truck, the best value is generally not on a dealer's lot. Some fleet owners might be tempted to purchase a vehicle that has been marked down because it has been on the lot for an extended period of time. In such situations, there is usually a reason the vehicle has not moved (many times, a buyer will have a truck customized and then decide against its purchase. When these trucks aren't sold to another buyer for a prolonged duration, it is usually because the specifications are not ideal for common applications). Additionally, buying off the lot could cause a buyer to incur costs for options that do not benefit him.

On the other hand, by customizing a vehicle to meet the specific needs of an operation, a fleet manager can ensure that he buys all the options he needs and none of the options he doesn't. He can select from a variety of features that will lower his operating costs; furthermore, he can choose many specifications at relatively little or no cost, avoiding the expensive and time-consuming process of adding them later.

## Fuel Efficiency

With the country's perpetually unstable fuel prices (evident in the recent spikes in diesel costs at the pump), maximizing fuel efficiency can dramatically decrease the cost of operating a commercial vehicle fleet. While many motor carriers are cutting fuel costs with nose cones, which can easily be applied after market, few take advantage of the significant increases in fuel economy that can result from purchasing a custom vehicle.



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more fuel it will burn, so fitting a truck with an engine that is bigger than what is necessary to handle its maximum load will result in needless fuel loss. On the other hand, engines that are too small will run at full load a greater percentage of the time, also burning more fuel than what is necessary. (Running an engine at full load

A truck can be built to perform optimally for its intended work load in its intended environment. A major factor in this optimization is the selection of an appropriately-sized engine. The larger an engine is, the

for extended periods can also decrease an engine's life expectancy). Selecting a perfectly-sized engine may seem difficult, but with a competent dealer's help, the process can be easily accomplished and can save a motor carrier significantly in fuel costs.

Fleet owners can also customize the gearing of their trucks to optimize their performance in the environment in which they operate. A truck that is geared to operate efficiently at zero to thirty miles an hour will burn far less fuel in a city environment, but will consume large amounts of fuel on the highway. Likewise, a slow-gear truck will burn less fuel in a hilly environment, but more on flat roads.

When fleet owners do not size and gear their engines according to need, on the other hand, they can incur excess fuel costs. There have been numerous cases in which owners decide to slow their fleet speed to save fuel. But when a truck is spec'ed, it is set up to run at a specific cruise speed. By slowing a truck down from its intended cruise speed, fuel economy can become worse because the engine is running below its maximum efficiency.

In summation, to maximize fuel economy, a fleet owner should consider the following when purchasing a new truck:

- What is the expected maximum load of the vehicle?
- Will the vehicle be operated on the interstate or in the city?
- Will the vehicle be operated in a flat or hilly environment?


## Productivity

Over the last decade, technologies have been developed in the truck manufacturing industry that can increase productivity and decrease downtime. While many of these options do require a capital investment during the purchasing process, they can quickly pay for themselves by minimizing downtime and drivers' workload.

A common problem for commercial vehicle drivers is an inability to monitor the life of their vehicle's battery when the engine is not running. Whether it's the operation of a lift gate or electrical devices in the cab when parked overnight, some drivers will end up killing their battery by not restarting their engine at frequent enough intervals; meanwhile, other drivers are overly cautious and leave their truck idling for extended periods while electrical devices are in use to avoid a dead battery. In the former case, a truck will experience downtime while a mobile service truck is deployed to recharge the battery, in the latter, fuel is burned unnecessarily while the truck idles.

Problems with battery life can be avoided with the implementation of load shedding circuits, which automatically cut the power to electrical devices when the battery runs low, forcing the driver to restart the engine. With a load shedding circuit, drivers can save fuel by shutting down their truck engines when operating lift gates or other devices without worrying about killing their batteries and being stranded.

Other custom options can maximize on-road time by saving drivers time during pre trip inspections or at job sites. Some manufacturers offer an automated pre trip light inspection system. This device causes a vehicle's lights to illuminate sequentially without the driver being in the cab. This way, only one person is needed to perform a light inspection instead of two.



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Fleet owners can also opt for multiple-duty switches. For example, a truck with a power take off (PTO) could be customized with one switch that activates the PTO, signals the engine to ramp to the proper

RPM, and turns on safety strobes and tool box lights. This allows a driver to save time by not having to activate each system individually.

### Safety

With anti-lock break systems becoming standard for most commercial vehicle manufacturers, the addition of traction control is no longer an expensive option. For fleets that operate even occasionally in adverse weather conditions or on unpaved roads, the importance of traction control cannot be overstated. Not only does the option allow drivers greater control on slick roadways, it can prevent vehicles from becoming stuck in mud or snow. Because a single tow bill for a stuck vehicle can exceed the cost of installing traction control, the option promotes not only safety but financial savings as well.

The implementation of interlocks that prevent some systems from operating while other systems are in use can also prevent dangerous and costly accidents, such as the one that occurred a few years ago on I-580 near

Pleasanton. In that case, the driver of a dump truck attempted to activate his Jake Brake and accidentally hit the gate open switch, spilling his load of gravel on the highway. Though no one was seriously injured, the highway was closed for several hours for cleanup, and the company that owned the fleet was held liable for damages to the windshields and body paint of several other vehicles.

In the above example, the company that owned the truck decided to install interlocks on their dump trucks that prevented the tailgate from being opened when the vehicles traveled faster than 5mph. In this manner, interlocks can prevent many accidents caused by driver error.

Opting for power mirrors can also promote driver safety. With fleets that use multiple drivers for one truck, this is especially important. Power mirrors make adjustments easy for drivers, encouraging them to ascertain that they have full visibility before driving.

### Longevity

Building a truck to specifications that meet an operation's unique needs is invaluable in increasing vehicle and component longevity. A competent and trustworthy truck dealer can aid a fleet owner in customizing such a truck. Consequentially, it is important for a fleet owner to communicate what his truck will be hauling, where it will be operating, and the expected duration of ownership when purchasing a new vehicle.

Not only can a dealer help a buyer to select an engine size that will optimize fuel efficiency while maximizing engine life, he can select axels (and corresponding frame rails, tires, and brakes) to fully accommodate the intended load. This will both increase a vehicle's longevity by preventing premature component failure caused by overloaded axels and ensure that the vehicle can safely carry its intended load.

Dealers can also help to select appropriate options for specific climates. For example, vehicles operating in hot climates can experience overheating with a standard viscous engine fan drive. An electronically controlled on/off style fan will keep the engine cool and the air conditioning working properly. This will increase a/c longevity by preventing a/c compressor head pressure from building up and destroying the a/c pump.

Vehicle interlocks can also promote longevity, particularly with trucks fitted with PTO's and differential locks. Interlocks can prevent these systems from engaging over a set speed, protecting them from damage.

## Driver Retention

In the current job market, where the impending retirement of Baby Boomers (as well as the loss of drivers who found other work during the economic recession) is shrinking the potential employment pool, attracting and retaining good drivers is essential in maintaining a competitive advantage. When fleet owners select vehicles that cannot adequately perform the duties necessary to

the operation, drivers become frustrated. Customizing a truck to meet the specific needs of its intended functions and environments—as well as selecting options that promote ease of operation and comfort—can encourage driver retention. Good drivers will want to sign on with motor carriers that provide the best truck for the job at hand.

## Conclusion:

In today's competitive marketplace, the trucking companies that will succeed are those that know how to maximize productivity and efficiency. Selecting a custom truck fleet is instrumental in achieving this goal. By ordering trucks built to meet the specific needs of an operation rather than selecting generic trucks from off the lot, fleet owners can avoid paying for options they don't need while assuring that they have every option they do need. Truck customization promotes value, efficiency, productivity, safety, longevity, and driver retention.

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