

# FIFTH WHEEL MAINTENANCE

**IS  
GREASE  
THE ONLY  
OPTION?**



Fifth Wheel Slick Plate Whitepaper





## Protecting the Fifth Wheel

There is not a standard schedule for recommended fifth wheel greasing applications because of the multiple factors at play - the weight of the trailer and load, the driving conditions, and how often the fifth wheel and trailer face are cleaned.

Like many other professions, truckers may routinely find themselves under time constraints and deadline pressures. The temptation may develop to gloss over regular maintenance, but trying to stretch the length of time between grease applications – or simply failing to grease for long enough – can create significant safety issues.

“I do not believe we have enough grease on the fifth wheels most of the time as we drop and hook daily,” one assistant operations manager said.

Failing to grease the fifth wheel frequently will cause metal-on-metal friction that negatively impacts both the truck and trailer, as well as other components like suspension and steer-tire wear. It can cause problems in how the trailer pulls, but the potential risks extend beyond an inconvenience, wear-and-tear, or a driving hazard.

According to the [safety manual of one truck manufacturer](#), neglecting routine fifth wheel maintenance could ultimately lead to tractor-trailer separation - a catastrophic scenario for all parties involved.

## New Kid on the Block

Automatic greasing systems are an alternative to performing manual applications. A relative newcomer to the industry, these greasing units are installed on each truck and ease the burden on technicians and mechanics.

“Our fifth wheels get a shot of grease every 15th time the brakes are hit,” Eric Green, VP of Maintenance for Stone Transport, said.

The most significant downsides to the automatic greasing systems are the cost of each unit and the ongoing cost of grease, which is why some companies have explored other grease-free options.

The invention of trucking's fifth wheel dates back more than one hundred years, when inventor Hermann Farr and his partner, Charles Martin, applied for a patent in 1915. Grease, of course, has been around far longer for thousands of years.

The two seem inseparable – grease is applied to the fifth wheel top plate to keep the connection between truck and trailer smooth and lubricated. But is greasing the fifth wheel top plate still the only option more than a century after the fifth wheel's debut?



Based on a survey sent to more than 500 trucking fleets

David Boughton, Terminal Manager of Don Hummer Trucking in Cedar Rapids, Iowa, says the fleet has explored other lubrication options, but in his opinion, “grease is still the best (choice) for this fleet.”

Applying grease to a single truck does not take much time – only a couple of minutes. But depending on the size of the fleet and the frequency of application, companies can spend a substantial amount of time greasing every unit.

“We grease every time our units are in the shop,” Scott Young, ABF’s Fleet Services Procurement Manager, said. “That usually equates to once or twice a month per truck.”

Do the math – ABF runs thousands of trucks – and they invest over two thousand man-hours applying grease annually.

"We are happy with our OEM Teflon plates," Eddie Luper, Maintenance Manager for Arlo G. Lott Trucking, said. "There's less maintenance time (when compared to grease), but the biggest advantage is they come factory-installed, so they're ready to go when we take delivery of any new trucks."



## Removing the Mess

Many trucking industry vets have what they call an image issue when it comes to grease, so any alternative that removes grease altogether is better, they say.

"Grease is just a mess," long-time owner/operator Dick Pingel said. "The first time you hook up, no matter how much grease you put on, it gets all over the front of the trailer."

Jamie Hagen, the owner of Hell Bent Xpress, a fleet operating out of Stratford, South Dakota, agrees with Pingel - no grease is the way to go.

"I was desperately trying to steer clear of that massive mess," Hagen said. "All it does is displace out the sides. It goes down the sides of the trailer. From there, it's got to go somewhere, and it eventually lands on the highway and those truck stop parking lots."

Pingel is one of many who have experience with OEM Teflon plates. The polytetrafluoroethylene (PTFE) material has one of the lowest coefficients of friction of any solid, making it a natural replacement for grease when it comes to maintaining a quality truck-trailer connection.

"Nothing is truly maintenance-free, but the Teflon plates do well for our company," Luper said.

Arlo G. Lott offers various services, including flat/long haul, maxi flatbeds, bulk long haul, and regional bulk.

"Our plates typically last about two years before they need to be replaced," Luper said.

## #LoseTheGrease

Pingel installed two Teflon plates on his own truck but kept running into problems, he says. They were difficult to install – many require welding – or would not stay on correctly, so imagine his reaction when he discovered Minimizer's 5th Wheel Slick Plate.

"I was thrilled with it," he said. "I tried two others before it. The Minimizer one was the best, and it was the best designed. They had a custom one for every fifth wheel so that you could order by the model. That makes a huge difference."

The 5th Wheel Slick Plate is made from a proprietary ultra high molecular weight polyethylene (UHMWP), designed to provide consistent friction relief. Hagen says that is not something you receive from greasing the fifth wheel.

"Over time, that grease squishes out," Hagen said. "There is a period when you have a dry fifth wheel. With 5th Wheel Slick Plate, it's 24/7 protection."

Minimizer Technical Manager Gordon Eby says the 5th Wheel Slick Plate's UHMWPE material offers durability, slickness, and superior friction reduction not found in the standard Teflon competitors.

"These are all ideal attributes for trailer loads up to fifty five thousand pounds of vertical force," Eby said. "The 5th Wheel Slick Plate helps to protect both the truck and trailer under rugged driving conditions."



**"WITH THE 5TH WHEEL  
SLICK PLATE, IT'S  
24/7 PROTECTION."**



## An Improved Connection

When the fifth wheel is greased, sometimes the truck and trailer become stuck together because of the way the fifth wheel top plate interacts with the trailer's upper coupler. The 5th Wheel Slick Plate helps reduce that risk, and it's a benefit Hagen noticed when he switched friction sources.

"The truck steers quite a bit smoother with the Slick Plate on it. When it's metal-on-metal, the truck will wander. With the 5th Wheel Slick Plate, that's all gone. There's more control," Hagen said.

"If a truck uses grease, it will trap the dirt and road grime, causing the foreign material in the grease to be drug around on the face of both the fifth wheel and trailer," Eby said. "This increases wear on both unless the grease is constantly cleaned off and then the fifth wheel top plate is re-greased."

The consistency offered by the 5th Wheel Slick Plate increases the lifespan of equipment, something L&T Trucking Foreman Brad Clark can attest to personally.

"The 5th Wheel Slick Plate takes the wear off of the fifth wheel top plate itself," Clark said.

L&T Trucking's owner dislikes grease, Clark says, and wants his fleet looking tidy and detailed, an attitude Hagen shares.

"You wouldn't show up to a job interview looking like you just rolled out of bed, right?" Hagen said. "It's the same thing when you're operating a fleet. If one of your trucks has grease going down the trailer and flying off everywhere, it doesn't look good. Period."

**SLICK PLATE  
INSTALLATION  
DOES NOT  
REQUIRE A MECHANIC  
OR TECHNICIAN.**



## Installation is a Breeze

The product comes pre-drilled with all of the necessary hardware, including steel ramblers designed to reduce wear on the ramp as the trailer is dropped and hooked.

The bolts that are used to attach the 5th Wheel Slick Plate are recessed into the setup. As it eventually wears down, the gap between the top of the 5th Wheel Slick Plate and the hardware will ultimately decrease. Once that gap is reduced to .010 to .015 of an inch (about one-sixty-fourth of an inch), the product should be replaced.

Hagen traded in the first truck that he attached a 5th Wheel Slick Plate to after four years of use. The product was still functional, so he left it on for the next owner.

The Minimizer 5th Wheel Slick Plate carries a five year warranty.

## The Most Practical Solution

Greasing the fifth wheel has been necessary routine maintenance for more than a century in the trucking industry, but technology is advancing to the point where it is no longer required. It is a messy job that often results in the grease running up the side of the truck, which can result in a less than professional image for a company.

Automatic greasing systems provide some relief, but with the cost of the unit, ongoing maintenance, and the cost of the grease itself, it is still not considered the best alternative to simple greasing.

For years, Teflon plates have been the standard industry alternative to grease applications, but they are complex to install and wear down quickly, causing many Teflon plates to carry a simple two-year warranty.

The UHMWP material used in the Minimizer 5th Wheel Slick Plate holds up to the rugged conditions necessary to protect both the tractor and the trailer and comes with a five-year warranty.

Comparing all of the available options, the Minimizer 5th Wheel Slick Plate is the recommended option for overall effectiveness, cost savings, and ease of use.

To learn more, visit [www.minimizer.com](http://www.minimizer.com).