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Over time in a severe duty application any rear axle can fail, but there are some ‘avoidable’ failures. Wheel spin is always hazardous to components, it’s kind of like falling, *the spin doesn’t kill you, it’s the sudden stop!*

Given the design of a normal tandem axle, crawling on and off the road can put the pull wheels in a position to lose traction, either on a slippery surface or by having one wheel position off the ground, all it takes is one wheel position loosing traction and you can’t move because all the torque is sent to the wheel that turns the easiest, the production stopping ‘spin.’



There is, however, a simple fix if you find yourself with *one pull wheel spinning*:

Apply the service brake (stop the wheel from spinning) and shift the Axle Inter-Lock switch on the dash to ‘Lock.’ This will lock the axle together, shifting a portion of the available torque to the wheel on the other side of the axle, now you’ll have an additional pull wheel working, and could be back to production!



Always remember:

Once you get out of a bind and back on good traction, apply the service brake and shift the Axle Inter-Lock back to ‘Un-Lock,’ you don’t want to run down the highway with the Inter-Lock “Locked In.”

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Fuel Economy in today’s economic climate is a term which could mean the difference between surviving and becoming extinct, thankfully in a severe duty application the factors are not as varied as a highway application.

Once all initial operating parameters are set the main point becomes proper maintenance; change the oil and filters on a regular cycle, keep everything in working order from the engine to the tires and make sure to keep the overhead adjustments in check.

‘Overhead Adjustment’ refers to the clearance between the valve stem and rocker arm, proper setting will allow for a ‘window’ or range from minimum to maximum. Too tight and you lose clearance, too loose and you gain clearance, either way once outside of the ‘window’ and your engine is not breathing correctly (in some extreme cases this could lead to a catastrophic engine failure too.).

Air is the biggest part of the fuel mixture, get the mixture wrong and your engine isn’t providing you the return on investment on which you rely, don’t follow the ways of the Dinasoar!

SEVERE DUTY MAINTENANCE/OPERATION TIPS JULY 2009

As long as we are talking about air, the most important thing for a long life in a severe duty application is 'clean.' Clean oil, clean coolant AND clean air! Inspect the intake system thoroughly with each PM service. Make sure the money you spend on air filters isn't wasted.

Inspect the Air Cleaner housing the next time you change the filter, know how the air flows through it! One side of the filter should be clean, one side dirty.

Always wipe the housing out before installing a new filter, replace the rubber gasket, install ALL the retaining nuts to the proper torque (usually embossed on the side of the nut), and NEVER, EVER, blow out and reuse a filter! Best practice is; *don't remove the filter unless you are prepared to replace the filter.*



Just as important as the filter is the ductwork between the filter housing and the engine. Usually a visual inspection is all that's needed, BUT make sure to look at everything. Standing beside the truck, or between the tire and the frame will not allow you to see the entire system. Get in the habit of visually inspecting from above, behind and beside the truck. Ensure all clamps are tight, no pieces are missing, make sure the duct is not making contact with any objects and investigate and correct any signs of rubbing or chaffing.

A Filter Minder or Intake Restriction Gauge can be an effective tool in monitoring inlet restriction (air filter life). However, if you have a leaking intake pipe, damaged air filter, or any situation that allows dirty air to enter the intake, you'll get a false reading from the Filter Minder! All the more reason to KNOW YOUR INTAKE SYSTEM!



Having an engine go down because of dirty air is like running out of gas in a car with a working gas gauge: there is no excuse!

When in doubt refer to your Driver's Manual, Maintenance Manual or call one of our professionals here at Team Empire!



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