NATROAD

Get Fleet Fit
Fact sheet

Efficiency Upgrades

You can upgrade your truck and lower emissions without buying a new vehicle.

Some of the most cost-effective ways to reduce emissions are to make existing vehicles more fuel efficient. Most fleets will already be familiar with the range of after-market upgrades that can be retrofitted to even the oldest trucks. Some have short pay-back periods, but you still need to ensure **the equipment makes sense for the kind of work your trucks do**. You may already have one or more of these fitted, and results will vary. Just note that the savings don't simply stack on top of one another, however they're all going to make a positive difference. Here, we step out the best equipment to slash your fuel bill at a fraction of the cost of a new truck.

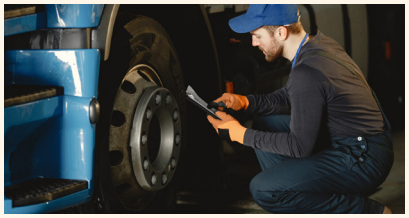
Tyre optimisation

Fuel saving: Up to 10%

As the only part of your truck that in contact with the road, tyres are critical to both efficiency and safety. There are two main aspects to consider: keeping your tyres in optimum condition and using an efficient tyre.

Tyre pressure monitoring:

Keeping your tyres in prime condition can be cost-free if you monitor them regularly Read more in the Get Fleet Fit, Fleet Practices fact sheet. Another option is to invest in more failsafe options. A tyre pressure monitoring system for example will alert the driver if tyre pressures get low, or even if a tyre gets too hot, potentially providing warning before blowouts occur. This not only improves safety, it can also reduce fuel bills. Going one step further, automated tyre inflation systems can provide similar warnings, along with continual maintenance of correct tyre pressures.

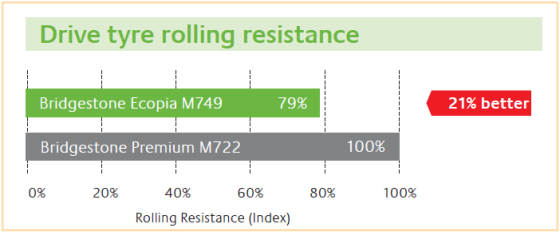


Low-rolling resistance tyres:

All tyres resist motion as they roll over the road surface. The hotter a tyre becomes, the more it resists requiring more energy, more fuel and generating more emissions. Low-Rolling Resistance Tyres (LRRTs) are designed with special compounds and a unique internal structure, minimising heat generation. In turn, this improves a tyre's ability to roll with less energy behind it, resulting in fuel and emissions savings. Despite their higher purchase price, the fuel savings can offset the cost premium of the LRRTs and provide a payback.

Ultra-wide single tyres ('super-singles'):

As the name suggests, a super single tyre replaces the dual tyres on a typical drive axle or trailer. They are lighter than a dual tyre arrangement and can also reduce fuel consumption. These tyres need to have a load rating to match your operation and may perform differently to duals in snow and off-road, so talk to your tyre supplier.



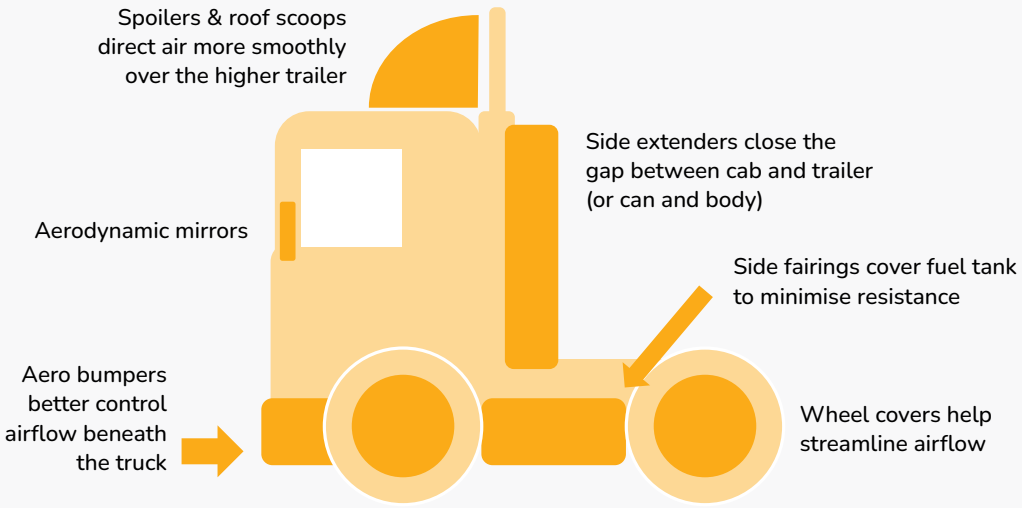
Access all the resources here

Aerodynamic truck parts (prime mover & rigid)

Fuel saving: Up to 10%

If your trucks are used in high-speed driving (e.g. interstate linehaul or regional distribution), optimising their aerodynamics is a must. At its simplest, this means removing unnecessary clutter that disrupts smooth airflow (e.g. aerials, racks, handles, extra lights etc.) and closing large gaps between sections of the truck. These all create aerodynamic drag increasing fuel consumption.

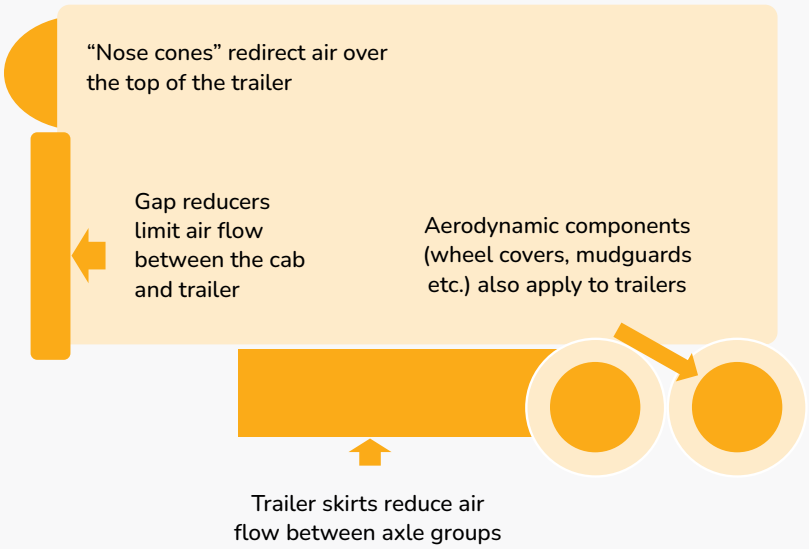
The same principle applies to both rigid trucks and semis. Individual parts or integrated 'aero kits' can be retrofitted to the cab and chassis. Speak to your supplier for the best combination.



Aerodynamic trailer kits

Fuel saving: Up to 10%

Streamlining your cab is only half the equation – anyone carting at least one trailer on high-speed routes should also consider the aerodynamics of what they're towing. Potential efficiency upgrades include:



Anti-idling systems

Fuel saving: Up to 5%

In theory, wasting fuel by running the engine when it's not needed is an easy fix – just turn it off! In reality, old habits die hard and many drivers don't realise how much idling they do. For some trucks this information is available on the dashboard display. Across a whole fleet during an entire year, idling can add up to a hefty, avoidable cost. Training and driver incentives can help change behaviours (read more in the Get Fleet Fit Eco Driving fact sheet) and tehcnological solutions can also be necessary. Many trucks come with an idle shut-down fitted as standard. For those that don't, aftermarket units can be fitted. You should check with your dealer or trusted mechanic/supplier what solutions may be suitable for your trucks.

Auxiliary Power Unit (APU)

Fuel saving: varies

If your drivers are idling engines to power equipment like refrigeration or air conditioning, they're using a very large engine for what is a relatively minor task – and that's a waste of fuel. There are other options that are better for the task, such as auxiliary power units offering an **alternative energy source to power equipment**. Some suppliers claim you can recoup your costs within a year, depending on how much idling your fleet is doing. A range of auxiliary power units are available from some manufacturers and aftermarket suppliers, depending on what equipment you need to keep running. Examples include:

- Diesel-powered or battery-powered air conditioning units for sleeper cabs
- Off-engine refrigeration systems (diesel or electric)
- Electric Power Take Off (PTO) to power pumps, compressors, or hydraulics on truck or trailer.

By adopting a combination of these upgrades to suit specific duty cycles, truck fleet operators can effectively reduce fuel consumption, lower operating costs, and contribute to environmental sustainability goals.

Find out more

Kenworth SuperTruck 2 can show you what is being done with an innovative designs than can cut fuel costs by 50%.

Bridgestone has LRRTs that can reduce fuel consumption by almost 7%, with the total fuel saving dependent on factors like the number of axles on the truck and trailer, road conditions, speed and driving style.

Volvo Trucks Australia. In 2018 Volvo Trucks Australia demonstrated a 'Fuel Super Truck' concept that could achieve a 20% fuel saving by combining several off-the-shelf technologies available in Australia.

The USA's SuperTruck program is a challenge for truck-makers to find **next-generation efficiency technologies**, that make for some very futuristic designs. A similar 'moonshot' project was also completed in Europe.

One large US fleet, Ryder, has successfully validated the fuel savings from using a gap-reducer, improving efficiency by about 4%.

Get Fleet Fit has been designed by NatRoad to guide truck operators towards improved fuel efficiency and reduced emissions in alignment with future government regulations and customer expectations. We've developed a 5-step roadmap to help create a clear, actionable plan for your business, plus more detailed information on important topics to help you along your unique journey.