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Wheel covers that cut fuel use

ADEF Ltd, United States

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Deflectors are cheap, lightweight covers fitted to lorry wheels, which improve fuel efficiency by reducing drag.



Fitted onto the eight wheels of a truck and its trailer, the Deflector cover – made of lightweight fabric – is calculated to cut fuel consumption by two per cent. It works by covering the wheel holes to reduce turbulence as lorries move at speed. Inventor Jon Fleck points out that on industrial-sized wheels, each of the holes is roughly the size of a car window.

The fuel-saving statistics have already aroused interest from multi-national trucking company Schneider National, which is testing the product on its 15,000-strong fleet. On average, it takes six months to break even on the \$50 Deflector outlay.

"I'm coming at this from an economic perspective," says Mr Fleck. "Quite frankly, carbon emissions aren't top of the agenda for these companies." He adds that there is additional money-making potential from advertising on the fabric.

Mr Fleck designed his first wheel cover 20 years ago, but the product virtually made him bankrupt. Its 50-odd metal components were hard to fit and its weight (3.5kg) cancelled out some of the fuel efficiency gains. It wasn't until he saw a pop-up laundry basket at a trade fair in Germany that the idea came to him to use fabric and wire instead: "That was the lightbulb moment." The Deflector, made of nine parts, weighs just 800g.

Richard Branson



"I cannot see a world without trucks. This simple idea could make a huge difference"

If all American trucks used the covers, Mr Fleck calculates they would save 460 million gallons of diesel a year. He says recent landmark legislation in California requiring long-haul truckers to fit aerodynamic devices could be just what his invention needs to really take off.

The author is Hannah Bullock, managing director of Green Futures

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