



TRAILER AERODYNAMICS – BELLY FAIRINGS

Company Profile

Distribution Location: Munster, Indiana

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Number of Employees: 95

Strategy Category: Aerodynamics

Number of Trailers: 20

Number of Power Units: 20

Founded in 1980 as one small store in Austin, Texas, Whole Foods Market is now comprised of 180 stores in North America and the United Kingdom. Whole Foods is a leading retailer of organic and natural food products. This year, the company is celebrating its 25th anniversary.

Project Description

In 2005, Whole Foods Market, Mid-West Distribution (MWD) became a member of the Smartway Transport Partnership. Whole Foods is dedicated to employing sustainable business practices and improving the efficiency of its operations. "Vision becomes a reality through the combination of thoughts, words, and actions. Our participation in SmartWay provides a framework to implement strategies and projects to achieve the environmental vision of Whole Foods Market," notes Steve Burse, Whole Foods MWD Facility Team Leader.

Whole Foods MWD decided to retrofit 20 existing trailers with belly fairings due to the effectiveness of these aerodynamics at reducing aerodynamic drag and improving fuel economy. Whole Foods is monitoring the performance of the fairing and measuring the fuel economy results.

In outside tests, the fuel economy benefits of belly fairings have been measured using the industry standard SAE Recommended Practice J132, Joint TMC/ SAE Fuel Consumption Test Procedure – Type II. These tests have shown significant fuel savings for a number of different tractor-trailer configurations.



Whole Foods MWD projects savings of 4% on total fuel costs due to the fairings. Projected yearly savings are 16,931 gallons, based on 2,582,032 miles traveled by the fleet. At \$2.50 per gallon of diesel, this equates to \$42,328 saved per year. Each gallon saved will reduce carbon dioxide emissions by 22 lbs, saving Whole Foods MWD a total of 186 tons per year. Through improved fuel economy, Whole Foods also expects reductions in particulate matter and nitrogen oxide emissions.