

Vocational Aerodynamics

Aerodynamic Potential

- Aerodynamic devices shown to reduce GHG emissions in heavy-duty trucks
- ARB Tractor-Trailer Greenhouse Gas and US EPA Phase 1 & 2 rules have integrated aerodynamic features into Class 7-8 heavy-duty trucks
- Based on the ARB/NREL Study
 - U.S. EPA recognized the GHG benefit of aerodynamic devices on vocational box trucks
 - US EPA Phase 2 rule offers credits for the use of aerodynamic devices on vocational trucks



Aerodynamic Devices Can Save Fuel

Aerodynamic Device(s)	Fuel Consumption Reduction (%)		
	Road Load @ 45 mph	Road Load @ 55 mph	Road Load @ 68 mph
Side skirts	6.1	5.6	5.2
Front fairing	5	6	6.9
Side skirts + front fairing	10.3	10.4	10.4
Rear fairing	2.7	3.3	3.8

How to Incentivize Aerodynamic Improvements

- Credit for using aerodynamic designs or technologies in Vocational Class 4-6 Truck
- Manufacturers could earn credits by either:
 - Showing reduced drag compared to a baseline using an innovative design; or
 - Using front fairing/side skirt technology



Vocational Class 4-6

Aerodynamic Credit Proposal

- Manufacturers could obtain the aerodynamic credit via one of two options:
 - Implement side skirt and front fairings or
 - Achieve a 5% reduction in coefficient of drag demonstrated by using either wind tunnel or coast down testing to show that the vehicle reduces drag over the baseline by at least 5%
 - Testing will be done in accordance with SAE J1263/SAE J2263 or SAE J1526 test procedures
- The aerodynamic improvements would be applied to a percentage of the new truck sales

