SmartWay℠ Transport Partnership
U.S. Environmental Protection Agency

How to Verify Components for SmartWay Tractors and Trailers

Summary of SmartWay Tractor & Trailer Program

U.S. Environmental Protection Agency Certified SmartWay tractors and trailers are a new generation of long-haul rigs equipped with cleaner, fuel-saving features. SmartWay tractors and trailers can achieve fuel savings of 10 to 20 percent (saving carriers between 1,700 and 3,300 gallons of diesel fuel annually), lower greenhouse-gas emissions, and significantly reduce oxides of nitrogen, particulate matter, and other air pollutants.

This document describes how to verify components for SmartWay using the SAE J1321 test procedure.



EPA SmartWay Interim Test Method

The EPA SmartWay interim test method assesses the fuel consumption impact of fuel-saving truck components to determine eligibility for inclusion in SmartWay.

SmartWay Specification

SmartWay is a service mark of the US EPA, designating the cleanest, most fuel efficient passenger vehicles. For commercial trucks, the SmartWay specification is currently available only for class 8 combination tractor-trailer trucks used in line haul service. These trucks typically use the most fuel of any type of heavy duty truck, because they drive the longest distances.

SmartWay Tractor-Trailer Designation

EPA, working with its SmartWay partners, identified a suite of vehicle designs and equipment that, taken together, can reduce the fuel consumption of a class 8 line haul combination tractor-trailer truck by 10% - 20%, relative to a truck not equipped with these features. Tractors and trailers equipped with these specifications and new cleaner engines are eligible to be designated as "SmartWay." Components and features that make up a SmartWay truck are not "SmartWay" since the SmartWay designation applies only to vehicles. However, components including aerodynamic trailer fairings can be evaluated to verify that the fuel savings meets the requirements of the SmartWay tractor-trailer specification.

Existing Test Methods

Existing fuel economy test methods for evaluating truck components do not specify test route or conditions. For the purposes of SmartWay, this interim test procedure modifies a well-accepted industry test, the *Joint TMC/SAE Fuel Consumption Test Procedure – Type II (SAE J1321 Surface Vehicle Recommended Practice (October, 1986)*, with provisions that ensure the results apply to equipment used on the type of truck covered by the current SmartWay designation: a class 8 combination tractor-trailer truck.

Components Evaluated by This Method

For SmartWay purposes, this interim test method is intended to evaluate equipment for class 8 tractors and dry van trailers. EPA is developing a

more comprehensive truck emissions test which, when completed, will supersede the interim method. A draft of this more comprehensive truck emissions test, entitled the *SmartWay Fuel Efficiency Test Protocol for Medium- and Heavy-Duty Vehicles: Working Draft (420-P-07-003)*, is available at:
http://www.epa.gov/SmartwayLogistics/transport//documents/tech/420p07003.pdf

EPA's more comprehensive truck emissions test, when complete, will potentially cover a wider range of truck types, applications and components.

Testing Costs

The manufacturer bears all test costs.

EPA SmartWay Requirements

EPA needs a copy of the test results and a statement from the product manufacturer and the test facility that it was a valid SAE J1321 test, and that the additional provisions required by EPA were met. EPA reserves the right to review all original test data and test reports, including records of ambient weather conditions. EPA further reserves the right to determine that the test was valid – e.g., conducted properly, by a credible test facility, in accordance with all the stated requirements, and consistent with good engineering judgment.

Contact EPA

Interested organizations should contact SmartWay prior to testing.

To contact EPA,

- send an e-mail to: SmartWay-tech@epa.gov
- telephone the SmartWay Transport Partnership Call Center at (734) 214-4767
- write to SmartWay Transport Partnership, US EPA, 2000 Traverwood, Ann Arbor, MI 48105.

If you have questions regarding SmartWay Certified Tractors and Trailers or SmartWay verified technologies, contact the SmartWay Technology Team at: SmartWay-tech@epa.gov.