Technical Report Documentation Page

1. Report No.	Government Accession No.	3. Recipient's Catalog No.
SWT-2016-12		
4. Title and Subtitle		5. Report Date
A Survey of Fuel Economy and Fuel Usage by Heavy-Duty Truck		October 2016
Fleets		Performing Organization Code
		322501
7. Author(s)		8. Performing Organization Report No.
Brandon Schoettle, Michael Sivak, and Michael Tunnell		SWT-2016-12
9. Performing Organization Name and Address		10. Work Unit no. (TRAIS)
The University of Michigan		
Sustainable Worldwide Transportation		11. Contract or Grant No.
2901 Baxter Road		
Ann Arbor, MI 48109-2150 U.S.	.A.	
12. Sponsoring Agency Name and Address		13. Type of Report and Period Covered
ExxonMobil Corporation		
Irving, TX 75039		14. Sponsoring Agency Code

15. Supplementary Notes

This study was performed in collaboration with the American Transportation Research Institute (ATRI), 950 N. Glebe Rd., Arlington, VA 22203.

16. Abstract

This report focuses on heavy-duty fleet fuel economy and related fuel-saving technologies and policies. The main objective of this survey was to understand the current on-road fuel economy performance of heavy-duty truck fleets, and the effects of fuel-saving technologies, strategies, and regulations on such fleets. Also of interest in this survey were various fuel-saving methods fleet managers have employed that have been beneficial, as well as those that have not. Fleet managers were asked to provide overall fleet characteristics and fuel economy information, including their views regarding current and future technologies, strategies, alternative fuels, and regulations. The survey yielded completed responses from 96 heavy-duty fleet managers, operating a combined total of just over 114,500 truck-tractors and approximately 350,000 trailers, and hauling a total of 9 billion tons of freight across 1.8 billion miles annually.

The main findings are as follows:

- The median heavy-duty fleet fuel economy reported in this study was 6.5 mpg, with the typical fleet hauling 2.1 million tons of cargo 10 million miles annually.
- Every heavy-duty fleet included in this survey currently uses diesel fuel, with biodiesel blends (B5, B10, and B20) being the most common alternative fuels in use.
- Fleet managers generally see the top advantages of specific alternative fuels as: lower in cost, cleaner (reduced emissions), and more available than other alternative fuels; they see the disadvantages of specific alternative fuels as: having low (or no) availability or infrastructure for distribution, increased cost overall, and possibly lowering fuel economy for their fleet.
- The most common fuel-saving technologies on the truck-tractor were: aluminum wheels, speed limiters, and low-rolling resistance dual tires; the most common fuel-saving technologies on trailers were: low-rolling resistance dual tires, aluminum wheels, and weight-saving technologies.
- The smallest fleets require faster payback periods than medium and large fleets when investing in fuel-saving technologies or when considering switching their heavy-duty fleet to an alternative fuel.
- Nearly all fleet managers feel that EPA heavy-duty emissions regulations will lead to higher or significantly higher truck operating costs, and all fleet managers surveyed feel that such regulations will lead to higher or significantly higher new truck purchase costs.

17. Key Words			18. Distribution Statement
Heavy duty, tractor, trailer, class 7, class 8, truck fleet, fuel economy, fuel			Unlimited
usage, fuel-saving technologies, truck emissions, regulations			
19. Security Classification (of this report)	20. Security Classification (of this page)	21. No. of Pages	22. Price
None	None	56	