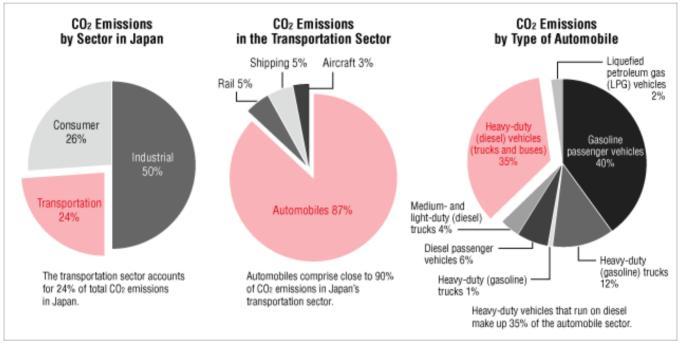
CSR > Previous Reports > Previous Reports in fiscal year 2009 > Products that Are Friendly to Both the Environment and People

# Products that Are Friendly to Both the Environment and People

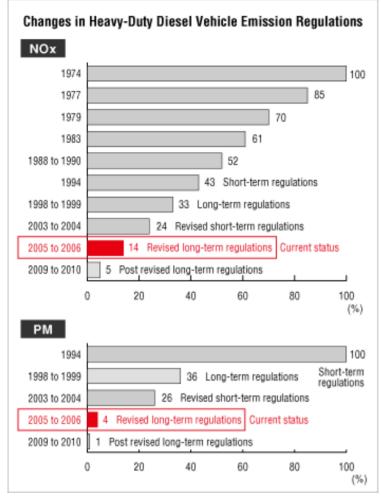
## **Environmentally Friendly Energy Conservation Tools and Vehicle Systems**

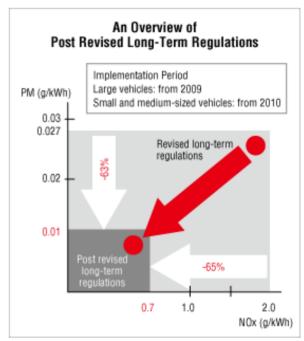
The transportation sector accounts for 24% of total CO<sub>2</sub> emissions in Japan. Looking at individual modes of transport, automobiles comprise almost 90% of this total. Therefore, the reduction of CO<sub>2</sub> emissions from automobiles is an extremely important issue. Diesel automobiles, which make up 45% of all automobiles, can play a substantial role in reducing these emissions.



The figures above are based on research by Hino Motors, Ltd.

Diesel engines are distinguished by their higher thermal efficiency compared to other internal combustion engines. Because they contribute lower amounts of CO<sub>2</sub> emissions owing to excellent fuel efficiency, diesel engines are considered as important in the fight against global warming. Despite these positive attributes, stricter emission regulations and standards are being implemented, particularly with regard to nitrogen oxide (NOx) and particulate matter (PM).





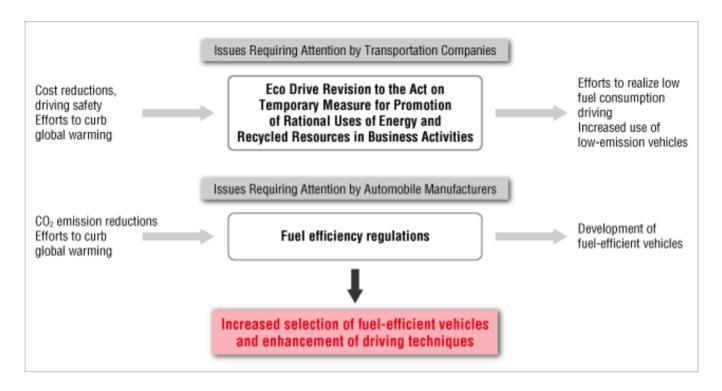
The figures above are based on research by Hino Motors, Ltd.

Companies in the transport industry must constantly deal with the issues of ensuring their ability to address environmental concerns, including compliance with exhaust emission regulations and standards, and taking efforts to enhance fuel efficiency, reduce transportation costs and maintain safe operations.

Taking into consideration society's growing awareness of the environment, customers are increasingly recognizing the need to use low-emission or alternative-fuel vehicles such as hybrid vehicles, while saving energy in all of their operations as a part of efforts to secure environmental safety and fulfill social responsibilities. Facing sharp hikes in fuel prices in recent years, however, these customers have the task of balancing their desire to use low-emission vehicles with the purchasing costs of such new vehicles.

Hino Motors is taking up the challenge to curb global warming and promote energy conservation by working diligently toward the development and practical application of a wide spectrum of technologies. The Company will strive to consistently meet the expectations of customers in both the tangible terms of carrying out diesel engine and HV development as well as the intangible terms of enhancing driving techniques and technologies that conserve energy.

### ■ Issues that Impact the Trucking Industry



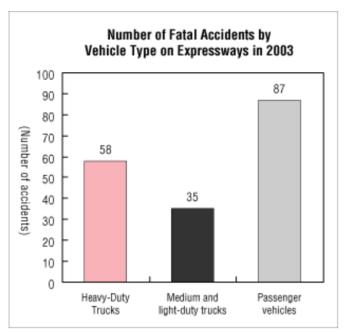
Hino Motors is offering seven environmentally friendly energy conservation tools and vehicle systems aimed at reducing CO<sub>2</sub> emissions and lowering customer costs.

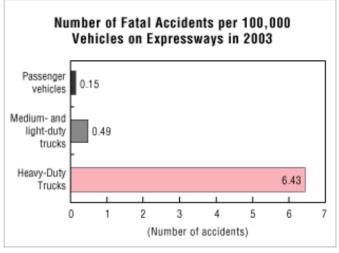


#### A Friendly and Safe System for Drivers

Hino Motors believes that bus and truck driving safety is a paramount concern for customers in the transportation industry. Bus and truck operators frequently drive long distances for extended periods. As a result, ensuring the safety of drivers and passengers as well as making efforts to reduce the risk of accidents are highly important.

■ Fatal Accidents Involving Heavy-Duty Trucks on Expressways in Japan





Source: "Current Status of Vehicular Safety Measures 2005," issued by the Road Transport Bureau of Japan's Ministry of Land, Infrastructure, Transport and Tourism



## Hino Adds Driver Monitor to Pre-Crash Safety System for Hino Profia Heavy-Duty Trucks

Hino Motors has begun offering Driver Monitor with its Pre-Crash Safety System<sup>1</sup> as optional equipment for certain models of Hino Profia heavy-duty trucks in Japan. In the course of the Company's efforts to enhance the safety of its vehicles, Driver Monitor was developed as a new function to monitor a driver's facial direction and whether their eyes are properly open.

In Japan, Hino Motors has been selling certain models of Hino Profia with Pre-Crash Safety System—the world's first collision-damage mitigating system for heavy-duty trucks—since 2006.

Pre-Crash Safety System detects vehicles that have stopped or are coming to a sudden stop, and issues audio warnings and a warning brake to the driver. The newly added Driver Monitor increases the speed of the warnings and determines the direction the driver is facing and whether their eyes are properly open. If the driver does not react appropriately to the warnings, Pre-Crash Safety System applies additional brake pressure to generate even greater braking force than the warning brake.

1. Pre-Crash Safety System and Driver Monitor were jointly developed by Toyota Motor Corporation and Hino Motors.	